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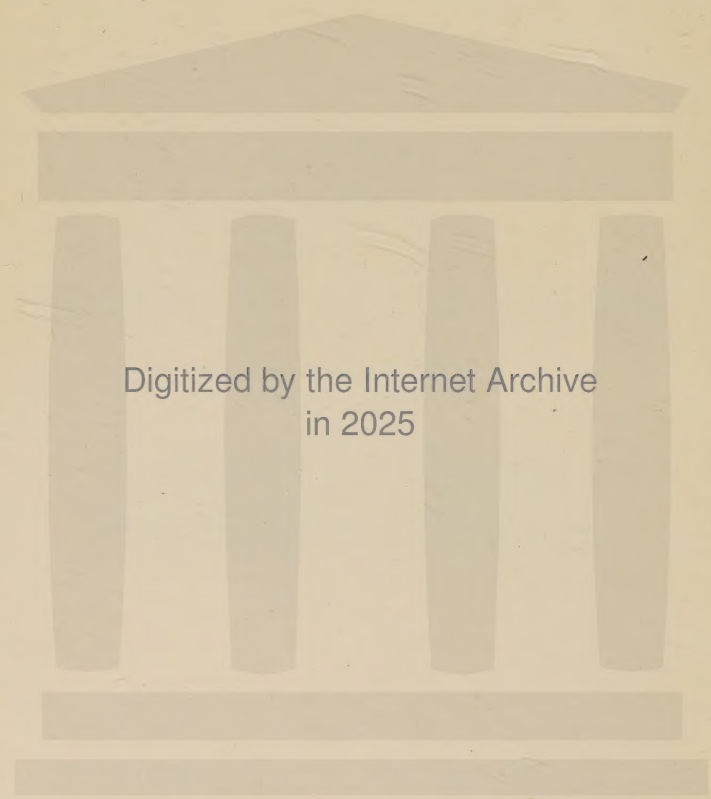
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LELAND STANFORD JUNIOR UNIVERSITY

TWENTIETH

ANNUAL REGISTER

1910-11

"The beneficence of the Creator towards man on earth, and the possibilities of humanity, are one and the same."—LELAND STANFORD.

"A generous education is the birthright of every man and woman in America."

STANFORD UNIVERSITY, CALIFORNIA
PUBLISHED BY THE UNIVERSITY
MAY, 1911

STANFORD UNIVERSITY
PRESS

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OFFICE DIRECTORY

The office of the President is room 112.
The office of the Registrar is room 116.
The office of the Academic Secretary is room 113.
The office of the Appointment Secretary is room 118.
The office of the Medical Adviser to Women is room 95.
The office of the Dean of Women is room 203.
The office of the Student Adviser is room 45.
The office of the Treasurer is room 250.
The office of the Committee on Public Health is room 95.

The various Departmental offices are given in the Schedule and in the Directory of Officers and Students.

The University Post and Telephone Office is *Stanford University, California.*

The University Railway Station and Telegraph and Express Office is *Palo Alto, California.*

Requests for *Registers*, blanks and other printed matter, and inquiries regarding terms of admission, advanced standing, etc., should be addressed to The Registrar, *Stanford University, California.*

[The rooms in the Inner Quadrangle are numbered consecutively, beginning at the left of the main entrance, ten numbers being allotted to each building. In the Outer Quadrangle forty numbers are allotted to each of the large buildings and ten numbers to each one-story building, beginning with the Assembly Hall and number 120. The Engineering buildings south of the Quadrangles begin with number 500. The Chemistry building is on the west avenue between the Quadrangles and the Museum.]

UNIVERSITY CALENDAR

1910

Aug. 25	Thursday	Entrance Examinations begin.
Dec. 15-21	Thursday-Wednesday	End-Semester Examinations.

1911

Jan. 10	Tuesday	Registration for Second Semester.
Jan. 11	Wednesday	Instruction begins.
Jan. 13	Friday	Mid-Year Conferring of Degrees.
March 9	Thursday	Founders' Day.
March 25	Saturday	Mid-Semester Recess.
April 2	Sunday	
May 11-17	Thursday-Wednesday	End-Semester Examinations.
May 14	Sunday	Birthday of Leland Stanford, Jr.
May 22	Monday	Commencement.

Aug. 24	Thursday	Entrance Examinations begin.
Aug. 25	Friday	Birthday of Jane Lathrop Stanford.
Aug. 28	Monday	Registration of Graduate Students.
Aug. 29	Tuesday	Registration of New Undergraduates.
Aug. 30	Wednesday	Registration of Matriculated Undergraduates.
Aug. 31	Thursday	Instruction begins.
Sept. 8	Friday	Conferring of Degrees.
Nov. 30	Thursday	Thanksgiving Recess.
Dec. 3	Sunday	
Dec. 14-20	Thursday-Wednesday	End-Semester Examinations.

1912

Jan. 8	Monday	Registration of Graduate Students.
Jan. 9	Tuesday	Registration of Undergraduates.
Jan. 10	Wednesday	Instruction begins.
Jan. 12	Friday	Mid-Year Conferring of Degrees.
Feb. 22	Thursday	Washington's Birthday.
March 9	Saturday	Founders' Day.
March 30	Saturday	Mid-Semester Recess.
April 7	Sunday	
May 14	Tuesday	Birthday of Leland Stanford, Jr.
May 9-15	Thursday-Wednesday	End-Semester Examinations.
May 19	Sunday	Baccalaureate Sunday.
May 20	Monday	Commencement.

BOARD OF TRUSTEES

[For Directory of Officers and Committees of the Board, see index.]

LIFE TRUSTEES	DATE OF APPOINTMENT
HORACE DAVIS	1885
TIMOTHY HOPKINS	1885
GEORGE EDWARD GRAY	1885
JOSEPH DONOHOE GRANT	1891
SAMUEL FRANKLIN LEIB	1891
LEON SLOSS	1891
THOMAS WELTON STANFORD	1893
FRANK MILLER	1893
CHARLES GARDNER LATHROP	1893

ELECTIVE TRUSTEES	TERM EXPIRES
*WHITELAW REID	1912
*GEORGE EDWARD CROTHERS	1912
WILLIAM BABCOCK	1915
CHARLES P. EELLS	1915
VANDERLYNN STOW	1916
JAMES LEROY NICKEL	1919

*Appointed by Mrs. Stanford under ten-year term plan.

OFFICERS OF INSTRUCTION AND ADMINISTRATION*

†DAVID STARR JORDAN, President of the University.

M. S., Cornell, 1872; M. D., Indiana Medical College, 1875; Ph. D., Butler College, 1878; LL. D., Cornell, 1886, Johns Hopkins, 1902, Illinois College, 1903. Instructor in Botany, Cornell, 1871-72; Professor of Natural History, Lombard University, 1872-73; Principal of Appleton (Wis.) Collegiate Institute, 1873-74; Lecturer in Marine Botany at Penikese, 1873-74; Teacher of Natural History, Indianapolis H. S., 1874-75; Professor of Biology, Butler College, 1875-79; Instructor in Botany, Harvard Summer School, Cumberland Gap, 1875-76; Assistant to U. S. Fish Commission, 1877-91; Professor of Zoology, Indiana University, 1879-85; President of Indiana University, 1885-91; President of the California Academy of Sciences, 1896-98, 1901-03, 1908, 1911; U. S. Commissioner in charge of Fur Seal Investigations, 1896-98, of Salmon Investigations, 1904; International Commissioner of Fisheries, since 1908; President of the American Association for the Advancement of Science, 1909-10; Member of International Commission of Zoological nomenclature, from 1904; Chief Director, World Peace Foundation, since 1910. President of Leland Stanford Junior University, since 1891.

JOHN CASPER BRANNER, Vice-President and Professor of Geology.

B. S., Cornell, 1882; Ph. D., Indiana, 1885; LL. D., Arkansas, 1897, Maryville College, 1909. Assistant Geologist, Imperial Geological Survey of Brazil, 1875-78; Special Botanist in South America, 1880-81; Special Agent of the U. S. Department of Agriculture for Investigating Cotton and the Insects affecting it in Brazil, 1882-83; Topographical Geologist of the Geological Survey of Pennsylvania, Anthracite District, 1883-85; Professor of Geology, Indiana University, 1885-91; State Geologist of Arkansas, 1887-92; President Geological Society of America, 1904; Member California Earthquake Investigation Commission, 1906-07; Special Assistant Geological Survey of Brazil, 1907-08. At Stanford, since 1891.

OLIVER PEEBLES JENKINS, Professor of Physiology and Histology.

A. B., Moore's Hill College, 1869, A. M., 1872; M. S., Indiana, 1886, Ph. D., 1889. Professor of Natural Science, Moore's Hill College, 1876-82; Professor of Natural Science, Indiana State Normal School, 1883-86; Professor of Biology, De Pauw University, 1886-91. At Stanford, since 1891.

MELVILLE BEST ANDERSON, Professor of English Literature, Emeritus.

A. M., Butler University, 1877; LL. D., Aberdeen, 1906. Professor of Modern Languages, Butler University, 1877-80; Professor of English

*Arranged in groups in the order of seniority of appointment. For alphetical Directory of Officers, see index.

†Absent on leave, first semester, 1910-11.

Literature, Knox College, 1881-86; Professor of Literature and History, Purdue University, 1886-87; Professor of the English Language and Literature, University of Iowa, 1887-91. At Stanford, since 1891.

†JOHN MAXSON STILLMAN, Professor of Chemistry.

Ph. B., California, 1874, Ph. D., 1885. Assistant in Chemistry, University of California, 1873-75; Student in Chemistry, Strassburg and Wurzburg, 1875-76; Instructor in Organic and General Chemistry, University of California, 1876-82; Chemist of the Boston Sugar Refining Company and Superintendent and Chemist of the American Sugar Refining Company, Boston, 1882-91. At Stanford, since 1891.

FERNANDO SANFORD, Professor of Physics.

B. S., Carthage College, 1879, M. S., 1882. Student, University of Berlin, 1886-88; Professor of Physical Science, Mt. Morris College, 1879-82; Superintendent of Schools, Ogle County, Ill., 1882-86; Instructor in Physics and Chemistry, Englewood (Ill.), High School, 1888-90; Professor of Physical Science, Lake Forest University, 1890-91. At Stanford, since 1891.

CHARLES DAVID MARX, Professor of Civil Engineering.

B. C. E., Cornell, 1878; C. E., Karlsruhe Polytechnicum, 1881. Instructor in Civil Engineering, Karlsruhe Polytechnicum, 1880-81; U. S. Assistant Engineer, Missouri River Improvement, 1882-84; Assistant Professor of Civil Engineering, Cornell University, 1884-90; Professor of Civil Engineering, University of Wisconsin, 1890-91. At Stanford, since 1891.

CHARLES HENRY GILBERT, Professor of Zoology.

B. S., Butler University, 1879; M. S., Indiana, 1882, Ph. D., 1883. Assistant in Natural Sciences and Modern Languages, Indiana University, 1880-84; Professor of Natural History, University of Cincinnati, 1884-89; Professor of Zoology, Indiana University, 1889-91; Assistant to the U. S. Bureau of Fisheries, since 1880; Assistant, in charge of scientific exploration of the U. S. S. "Albatross," 1889, 1890, 1902, 1904, 1906. At Stanford, since 1891.

DOUGLAS HOUGHTON CAMPBELL, Professor of Botany.

Ph. M., Michigan, 1882, Ph. D., 1886. Teacher of Biology, Detroit High School, 1882-86; Student at Bonn, Tübingen, and Berlin, 1886-88; Professor of Botany, Indiana University, 1888-91. At Stanford, since 1891.

EWALD FLÜGEL, Professor of English Philology.

Ph. D., Leipzig, 1886. Student, Universities of Freiburg and Leipzig, 1882-88; Privat Docent, University of Leipzig, 1888-92. At Stanford, since 1892.

CHARLES BENJAMIN WING, Professor of Structural Engineering.

C. E., Cornell, 1886. Fellow in Civil Engineering, Cornell University, 1886-87, Instructor, 1887-90, Assistant Professor, 1890-91; Engineer, Pompton (N. J.) Powder Co., 1887, Phoenix Powder Co., Farmingdale, N. Y., 1888; Assistant Engineer, Berlin (Conn.) Iron Bridge Co., 1889-90; Professor of Bridge and Hydraulic Engineering, University of Wisconsin, 1891-92. At Stanford, since 1892.

†Absent on leave, second semester, 1910-11.

FRANK ANGELL, Professor of Psychology.

B. S., Vermont, 1878; Ph. D., Leipzig, 1891; L. H. D., Vermont, 1892. Teacher in Washington (D. C.) High School, 1880-87; Assistant Professor of Psychology, Cornell University, 1891-92. At Stanford, since 1892.

LEANDER MILLER HOSKINS, Professor of Applied Mathematics.

B. C. E. and B. S., Wisconsin, 1883, M. S., 1885, C. E., 1887. Instructor in Engineering, University of Wisconsin, 1885-89, Assistant Professor of Mechanics, 1889-91, Professor of Theoretical and Applied Mechanics, 1891-92. At Stanford, since 1892.

ROBERT EDGAR ALLARDICE, Professor of Mathematics.

A. M., Edinburgh, 1882. Baxter Scholar in Mathematics, University of Edinburgh, 1882-83, Drummond Scholar in Mathematics, 1883-84; Assistant Professor of Mathematics, University of Edinburgh, 1883-92. At Stanford, since 1892.

WILLIAM RUSSELL DUDLEY, Professor of Botany, Emeritus.*

B. S., Cornell, 1874, M. S., 1876. Student Summer School, Penikese, 1874, Harvard University, 1876, Universities of Strassburg and Berlin, 1887-88; Instructor in Botany, Cornell University, 1872-76, Assistant Professor, 1876-92. At Stanford, since 1892.

AUGUSTUS TABER MURRAY, Professor of Greek.

A. B., Haverford, 1885; Ph. D., Johns Hopkins, 1890. Fellow in Johns Hopkins University, 1887-88; Professor of Greek, Earlham College, 1888-90; Student, Universities of Leipzig and Berlin, 1890-91; Professor of Greek, Colorado College, 1891-92. At Stanford, since 1892.

‡JOHN ERNST MATZKE, Professor of Romanic Languages.

A. B., Hope College, 1882; Ph. D., Johns Hopkins, 1888. Professor of French, Bowdoin College, 1889-90; Professor of the Romanic Languages, Indiana University, 1890-91; Associate in the Romanic Languages, Johns Hopkins University, 1891-93. At Stanford, since 1893.

JAMES OWEN GRIFFIN, Professor of German.

Graduate of the Pennsylvania State Normal School, 1873. Teacher in Pennsylvania State Normal School, 1873-74; Principal, Unadilla (N. Y.) Academy, 1874-79; Student, University of Göttingen, 1879-80; Principal of Delaware Academy (Delhi, N. Y.), 1880-85; Instructor in German, Cornell University, 1885-91, Registrar, 1890-91. At Stanford, since 1891.

RUFUS LOT GREEN, Professor of Mathematics.

B. S., Indiana, 1885, A. M., 1889. Instructor in Mathematics, Indiana University, 1885-86, Assistant Professor, 1886-88, Associate Professor, 1889-91, Professor of Pure Mathematics, 1891-93; Student, Johns Hopkins University, 1886-87. At Stanford, since 1893.

ARLEY BARTHLOW SHOW, Professor of Mediæval History.

A. B., Doane College, 1882; Graduate, Andover Theological Seminary, 1885; A. M., Doane, 1892. Pastor Congregational Church, Waco, Neb., 1885-87; Professor of History and English Literature, Doane

*Emeritus Professor since January, 1911.
‡Died September 18, 1910.

College, 1887-92; Student, University of Leipzig, 1900-01; Lecturer on History of the Early Church, Pacific Theological Seminary, Oakland, 1905-07. At Stanford, since 1892.

ORRIN LESLIE ELLIOTT, Registrar.

Ph. B., Cornell, 1885, Ph. D., 1890. Fellow in History and Political Science, Cornell University, 1885-86, Instructor in English, 1886-91, Assistant Registrar and President's Secretary, 1890-91. At Stanford, since 1891.

VERNON LYMAN KELLOGG, Professor of Entomology, and Lecturer in Bionomics.

B. S., Kansas, 1889, M. S., 1892. Student, Cornell University, 1891, University of Lepzig, 1893; Assistant Professor of Entomology, University of Kansas, 1890-93, Associate Professor, 1893-94. At Stanford, since 1894.

JAMES PERRIN SMITH, Professor of Paleontology.

A. B., Wofford College, 1884; A. M., Vanderbilt, 1886; Ph. D., Göttingen, 1892. Assistant Geologist and Chemist, Arkansas Geological Survey, 1887-90; Assistant Geologist, U. S. Geological Survey, 1895-1906, Geologist since 1906. At Stanford, since 1892.

LIONEL REMOND LENOX, Professor of Analytical Chemistry.

Ph. B., Columbia, 1888. Assistant Chemist, Bethlehem Iron Co., 1887; Instructor in Chemistry, Lehigh University, 1888-91; Chemist, Ordnance Department, U. S. N., Washington (D. C.), 1891-92. At Stanford, since 1892.

†HENRY RUSHTON FAIRCLOUGH, Professor of Latin.

A. B., Toronto, 1883, A. M., 1886; Ph. D., Johns Hopkins, 1896. Fellow in Classics, University College, Toronto, 1883-84; Classical and English Master, Brockville High School, 1884-86; Graduate Scholar, Johns Hopkins University, 1886-87, Fellow, 1887; Lecturer in Greek and Ancient History, University College, Toronto, 1887-93; Professor of Latin, University of Wisconsin, Summer Session, 1906, Columbia University, Summer Session, 1908, University of Chicago, Summer Quarter, 1910; Professor of Latin, American School of Classical Studies, Rome, 1910-11. At Stanford, since 1893.

WILLIAM FREDERICK DURAND, Professor of Mechanical Engineering.

Graduate U. S. Naval Academy, 1880; Ph. D., Lafayette, 1888. Engineer Corps, U. S. Navy, 1880-87; Special Duty as Assistant Professor of Mechanical Engineering, Lafayette College, 1883-85, Worcester Polytechnic Institute, 1887; Professor of Mechanics and Superintendent of Mechanical Department, Michigan State Agricultural and Mechanical College, 1887-91; Professor of Marine Engineering and Principal Graduate School of Naval Architecture and Marine Engineering, Cornell University, 1891-1904. At Stanford, since 1904.

HARRIS JOSEPH RYAN, Professor of Electrical Engineering.

M. E., Cornell, 1887. With Western Engineering Co., Lincoln, Neb., 1887-88; Instructor in Physics, Cornell University, 1888-89, Assistant Professor of Electrical Engineering, 1889-92, Associate Professor, 1892-

†Absent on leave, 1910-11.

95, Professor, 1895-1905; Judge Board of Awards, World's Fair, Chicago, 1893; U. S. Government Delegate, International Electrical Congress, St. Louis Exposition, 1904. At Stanford, since 1905.

GEORGE HEMPL, Professor of Germanic Philology.

A. B., Michigan, 1879; Ph. D., Jena, 1889; LL. D., Wisconsin, 1904. Principal, Saginaw (Mich.) H. S., 1879-82, La Porte (Ind.) H. S., 1882-84; Instructor in German, Johns Hopkins University, 1884-86; Student, Universities of Göttingen, Tübingen, Strassburg, Jena, and Berlin, 1886-89; Assistant Professor of English, University of Michigan, 1889-93, Junior Professor, 1893-97, Professor of English Philology and General Linguistics, 1897-1906; Professor of English, University of Chicago, Summer Quarter, 1897; President of the American Dialect Society, 1900-05; President of the Modern Language Association, 1902-03; President of the American Philological Association, 1903-04. At Stanford, since 1906.

EPHRAIM DOUGLASS ADAMS, Professor of History.

A. B., Michigan, 1887, Ph. D., 1890. Principal of High School, McGregor (Ia.), 1887; Principal of High School, Saginaw (Mich.), 1889; Special Agent in Charge of Street Railways, Eleventh Census, Washington (D. C.), 1890; Assistant Professor and afterward Professor of European History, University of Kansas, 1891-1902; Instructor in History, University of California, Summer Session, 1910. At Stanford, since 1902.

EDWARD CURTIS FRANKLIN, Professor of Organic Chemistry.

B. S., Kansas, 1888, M. S., 1890; Ph. D., Johns Hopkins, 1894. Chemist to the Palo Alto Plantation and Sugar Factory, Donaldsonville (La.), 1888; Chemist to the Bella Vista Mining and Milling Co., Los Quemados, Costa Rica, 1897; Instructor in Chemistry, University of Kansas, 1888-90; Student, University of Berlin, 1890-91; Assistant in Chemistry, University of Kansas, 1891-93, Associate Professor, 1894-99, Professor of Physical Chemistry, 1899-1903; Member of the U. S. Assay Commission, 1907. At Stanford, since 1903.

†ELLWOOD PATTERSON CUBBERLEY, Professor of Education.

A. B., Indiana, 1891; A. M., Columbia, 1902, Ph. D., 1905. Instructor in Science, Ridgeville College (Ind.), 1891; Professor of Physical Science, Vincennes University (Ind.), 1891-93, President, 1893-96; Superintendent of City Schools, San Diego (Cal.), 1896-98; Honorary Fellow, Columbia University, 1901-02, 1904-05; Professor of Education, University of Chicago, Summer Quarter, 1910, Harvard University, second half-year, 1910-11. At Stanford, since 1898.

ALPHONSO GERALD NEWCOMER, Professor of English.

A. B., Michigan, 1887; A. M., Cornell, 1888. Fellow in Classics, Cornell University, 1887-88; Principal, Mt. Morris (Ill.) H. S., 1888-89; Instructor in Latin and French, Knox College, 1889-91. At Stanford, since 1891.

CHARLES HENRY HUBERICH, Professor of Law.

LL. B., Texas, 1897, LL. M., 1898; D. C. L., Yale, 1899; J. U. D., Heidelberg, 1905; LL. D., Melbourne, 1907. Student, Universities of Berlin and Heidelberg, 1899-1900; Instructor in Political Science and Law, University of Texas, 1900-03, Adjunct Professor, 1903-05; Profes-

†Absent on leave, second semester, 1910-11.

sor of Law, University of Chicago, Summer Session, 1907; Acting Professor of Law, University of Wisconsin, 1909-10. At Stanford, since 1905.

STEWART WOODFORD YOUNG, Professor of Physical Chemistry.

B. S., Cornell, 1890. Assistant in Chemistry, Cornell University, 1890-91; Instructor in Chemistry, Swarthmore College, 1891-93. At Stanford, since 1893.

FREDERIC CAMPBELL WOODWARD, Professor of Law.

LL. B., Cornell, 1894, LL. M.,1895; A. M. Dickinson College, 1902. Attorney at Law, practicing in New York City, 1895-98; Professor of Law, Dickinson College, 1898-1902; Professor of Law, Northwestern University, 1902-07; Professor of Law, University of Chicago, Summer Quarter, 1908. At Stanford, since 1907.

JOHN CHARLES LOUNSBURY FISH, Professor of Railroad Engineering.

C. E., Cornell, 1892. Instructor in Civil Engineering, Cornell University, 1892-93; Division Engineer, Lake Shore and Michigan Southern Railway, 1906-08. At Stanford, since 1893.

†ALLYN ABBOTT YOUNG, Professor of Economics.

Ph. B., Hiram College, 1894; Ph. D., Wisconsin, 1902. Student Clerk, United States Census, 1899-1900; University Fellow in Economics, University of Wisconsin, 1900-01, Instructor, 1901-02; Instructor in Economics, Western Reserve University, 1902-04, Associate Professor, 1904; Assistant Professor of Finance, Dartmouth College, 1904-05; Assistant Professor of Economics, University of Wisconsin, 1905-06; Lecturer on Economics, University of California, Summer Session, 1909, Harvard University, 1910-11. At Stanford, since 1906.

BURT ESTES HOWARD, Professor of Political Science.

A. B., Western Reserve, 1883, A. M., 1886; A. M., Harvard, 1900; Ph. D., Heidelberg, 1903. Student, University of Berlin, 1903-04; Assistant Professor of Political Science, Leland Stanford Junior University, 1900-01, Acting Associate Professor, 1901-02. At Stanford, 1900-02, and since 1908.

ADOLPH BARKAN, Professor of Structure and Diseases of the Eye, Ear, and Larynx, Emeritus.*

M. D., University of Vienna, 1866; LL. D., University of Glasgow, 1901. Professor of Ophthalmology and Otology, Medical Department, University of the Pacific, 1872-82, Cooper Medical College, since 1882; Member of the Heidelberg Ophthalmological Society; Member of the Otological Society of Germany; Eye and Ear Surgeon, Lane Hospital, since 1895. At Stanford, since 1909.

HENRY GIBBONS, JR., Professor of Obstetrics, Emeritus.*

M. D., University of the Pacific, 1863; A. M., 1891. Dean of the Medical Department of the University of the Pacific, 1870-82, Professor of Materia Medica, 1870-73, of Obstetrics and Diseases of Women and Children, 1873-82; Dean of Cooper Medical College and Professor of Obstetrics and Diseases of Women and Children, since 1882; President

†Absent on leave, 1910-11.
*Emeritus since March 31, 1911.

of the State Medical Society of California, 1896; Visiting Obstetrician to Lane Hospital, since 1895; Member of American Association of Obstetricians and Gynecologists. At Stanford, since 1909.

JOSEPH OAKLAND HIRSCHFELDER, Professor of Clinical Medicine.

M. D., University of Leipzig, 1876. Professor of Materia Medica, Medical College of the Pacific, 1877-81, Professor of Clinical Medicine, 1881-82; Professor of Clinical Medicine, Cooper Medical College, since 1882; Visiting Physician, City and County Hospital of San Francisco, since 1878; Visiting Physician, Lane Hospital, since 1895. At Stanford, since 1909.

STANLEY STILLMAN, Professor of Surgery.

M. D., Cooper Medical College, 1889. Adjunct Professor of Surgery, Cooper Medical College, 1895-98, Professor of Surgery, since 1898; Assistant Visiting Surgeon, City and County Hospital, San Francisco, 1891-99, Visiting Surgeon, since 1899; Visiting Surgeon, Lane Hosptial, since 1895; Fellow of the American Surgical Association. At Stanford, since 1909.

EMMET RIXFORD, Professor of Surgery.

B. S., California, 1887; M. D., Cooper Medical College, 1891. Adjunct Professor of Surgery, Cooper Medical College, 1893-98, Professor, since 1898; Visiting Surgeon, Lane Hospital, 1895, City and County Hospital, San Francisco, since 1899; Fellow, American Surgical Association, 1901; Member Society of Clinical Surgery, 1903. At Stanford, since 1909.

WILLIAM OPHÜLS, Professor of Pathology.

M. D., University of Göttingen, 1895. Assistant at the Pathologic Institute at Göttingen, 1896-97; Professor of Pathology and Bacteriology, University of Missouri, 1897-98; Professor of Pathology and Bacteriology, Cooper Medical College, since 1898; Pathologist, Lane Hospital, since 1898. Member of the Association of American Pathologists and Bacteriologists; Member of the Society for Experimental Biology and Medicine. At Stanford, since 1909.

†RAY LYMAN WILBUR, Professor of Medicine.

A. B., Stanford, 1896, A. M., 1897; M. D., Cooper Medical College, 1899. Assistant in Physiology, Leland Stanford Junior University, 1894-96, Instructor, 1896-97, Assistant Professor, 1900-03; Lecturer and Demonstrator in Physiology, Cooper Medical College, 1899-1900. At Stanford 1894-97, 1900-03, and since 1909.

ARTHUR WILLIAM MEYER, Professor of Human Anatomy.

B. S., Wisconsin, 1898; M. D., Johns Hopkins, 1905; Assistant and Instructor in Anatomy, Johns Hopkins University, 1905-07; Assistant Professor of Anatomy, University of Minnesota, 1907-08; Professor of Anatomy, Northwestern University, 1908-09. At Stanford, since 1909.

HERBERT EUGENE BOLTON, Professor of American History.

B. L., Wisconsin, 1895; Ph. D., Pennsylvania, 1899. Graduate Student, University of Wisconsin, 1896-97; Harrison Fellow in History, University of Pennsylvania, 1897-99; Teacher of History, State Normal School, Milwaukee, Wis., 1899-1901; Instructor in History, University of Texas,

†Absent on leave, first semester, 1910-11.

1901-05, Adjunct Professor, 1905-08, Associate Professor, 1908-09; engaged in the archives of Mexico for the Department of Historical Research of the Carnegie Institution of Washington, D. C., 1907-08. At Stanford, since 1909.

FRANK MACE McFARLAND, Professor of Histology.

Ph. B., De Pauw, 1889; A. M., Stanford, 1893; Ph. D., Würzburg, 1896. Professor of Biology and Geology, Olivet College, 1889-92; Student, Würzburg, Zürich, and Naples, 1894-96. At Stanford, since 1892.

HAROLD HEATH, Professor of Zoology.

A. B., Ohio Wesleyan, 1893; Ph. D., Pennsylvania, 1898. Assistant in Biology, Ohio Wesleyan University, 1891-93; Professor of Biology, University of the Pacific, 1893-94; Harrison Fellow in Zoology, University of Pennsylvania, 1896-98. At Stanford, since 1894.

ARTHUR MARTIN CATHCART, Professor of Law.

A. B., Stanford, 1896. Student, Harvard University, 1896-97; Registered Office Clerk with Attorneys of Colorado Supreme Court, 1900-02; Attorney at Law, Colorado Springs (Colo.), 1903-04. At Stanford, since 1904.

WESLEY NEWCOMB HOHFELD, Professor of Law.

A. B., California, 1901; LL. B., Harvard, 1904. Attorney at Law, San Francisco, 1904-05; Instructor, Hastings College of Law, University of California, 1905; Member of Faculty of Law, University of California, Summer Session, 1907; Member of Faculty of Law, University of Chicago, Summer Quarter, 1908, 1910. At Stanford, since 1905.

GUIDO HUGO MARX, Professor of Machine Design.

M. E., Cornell, 1893. With Gleason Tool Co., Rochester (N. Y.), 1893-94; with Bement, Miles & Co., Philadelphia, 1894-95. At Stanford, since 1895.

HENRY WALDGRAVE STUART, Professor of Philosophy.

Ph. B., California, 1893; Ph. D., Chicago, 1900. Teacher, Hollister (Cal.) H. S., 1893-94; Fellow in Political Economy, University of Chicago, 1894-96; Instructor (pro tem) in Economics and Psychology, Washington University, St. Louis, 1896-97; Teacher, Central School, Oakland (Cal.), 1897-98; Principal, Woodland (Cal.) H. S., 1898-99; Fellow in Philosophy, University of Chicago, 1899-1900; Instructor in Economics and History, Ripon College, 1900-01; Instructor in Philosophy, State University of Iowa, 1901-04; Acting Professor of Philosophy, Lake Forest College, 1904-05, Assistant Professor, 1905-07. At Stanford, since 1907.

†GEORGE CLINTON PRICE, Professor of Zoology.

B. S., De Pauw, 1890; Ph. D., Stanford, 1897. Student in Biology, Johns Hopkins University, 1890-92; University of Munich, 1895-96. At Stanford, since 1892.

†GEORGE JAMES PEIRCE, Professor of Botany and Plant Physiology.

S. B., Harvard, 1890; A. M. and Ph. D., Leipzig, 1894. Assistant in Botany, Harvard University and Radcliffe College, 1890-92; Parker

†Absent on leave, second semester, 1910-11.

Fellow in Harvard University, studying in Bonn, Leipzig, and Munich, 1892-94; Assistant Professor of Botany, Indiana University, 1895-97; Acting Professor of Botany, University of Wisconsin, second semester, 1910-11. At Stanford, since 1897.

ALBERT CORNELIUS CRAWFORD, Professor of Pharmacology.

M. D., College of Physicians and Surgeons, Baltimore, 1893. Student at Johns Hopkins University, 1887-90, 1891-94, 1903. Assistant in Pharmacology, Johns Hopkins Medical School, 1894-1900; Pharmacologist, Bureau of Plant Industry, United States Department of Agriculture, 1904-08; Physiologist, Bureau of Animal Industry, United States Department of Agriculture, 1908-10. At Stanford, since 1910.

HANS ZINSSER, Professor of Bacteriology.

A. B., Columbia, 1899, M. D., 1903. Roosevelt Hospital, New York, 1903-05, Bacteriologist, 1904; Bacteriologist, St. Luke's Hospital, New York, 1905-10; Instructor in Bacteriology and Hygiene, Columbia University, 1906-10. At Stanford, since 1910.

ROBERT ECKLES SWAIN, Professor of Physiological Chemistry.

A. B., Stanford, 1899; M. S., Yale, 1901, Ph. D., 1904. Student, Universities of Strassburg and Heidelberg, 1901-02, Yale University, 1909-10. At Stanford, since 1898.

LILLIEN JANE MARTIN, Professor of Psychology.

A. B., Vassar, 1880. Teacher of Science, Indianapolis High School, 1880-89; Vice-Principal and Head of Department of Science, Girls High School, San Francisco, 1889-94; Student, University of Göttingen, 1894-98. At Stanford, since 1899.

CHARLES ANDREWS HUSTON, Professor of Law.

A. B., Chicago, 1902, J. D., 1907. Fellow in Political Economy, University of Chicago, 1902-03, Assistant in Rhetoric, 1903-04. Associate in Rhetoric, 1904-06. At Stanford, since 1906.

*ALVIN SAUNDERS JOHNSON, Professor of Economics.

A. B., Nebraska, 1897, A. M., 1898; Ph. D., Columbia, 1902. Reader in Economics, Bryn Mawr College, 1901-02; Tutor, Instructor, and Adjunct Professor of Economics, Columbia University, 1902-06; Professor of Economics, University of Nebraska, 1906-08; Professor of Economics, University of Texas, 1908-10; Acting Associate Professor of Economics, University of Chicago, Summer and Fall Quarters, 1909, Associate Professor, 1910-11.

ALBERT CONSER WHITAKER, Professor of Economics.

A. B., Stanford, 1899; Ph. D., Columbia, 1904. Scholar in Economics, Columbia University, 1899-1900, Fellow, 1900-01; Student, University of Berlin, 1901-02; Lecturer in Economics and Social Science, Columbia University, 1906-07. At Stanford, since 1902.

WILLIAM FITCH CHENEY, Clinical Professor of Medicine.

B. L., California, 1885; M. D., Cooper Medical College, 1889; Postgraduate courses, Johns Hopkins Medical School, 1893; Professor of Principles and Practice of Medicine, Cooper Medical College, since 1898; First Lieutenant, Medical Reserve Corps, U. S. A., 1908. Member of the American Medical Association, and of the National Association for the Study and Prevention of Tuberculosis. At Stanford, since 1909.

*Beginning August, 1911.

*ADDISON WEBSTER MOORE, Acting Professor of Philosophy.

A. B., De Pauw, 1890, A. M., 1891; Ph. D., Chicago, 1898. Principal, Marion (Ind.) H. S., 1891-92; Instructor in English, De Pauw University, 1892-93; Sage Scholar in Cornell University, 1893-94; Fellow in Philosophy, University of Chicago, 1894-95, Assistant, 1895-97, Associate, 1897-98, Instructor, 1898-1902, Assistant Professor, 1902-1904, Associate Professor, 1904-08, Professor, since 1908.

ARTHUR BRIDGMAN CLARK, Associate Professor of Graphic Arts.

B. Ar., Syracuse, 1888, M. Ar., 1891. Director of Trade Schools and Instructor in Drawing, New York State Reformatory, Elmira (N. Y.), 1888-89; Instructor in Architecture, Syracuse University, 1889-92. At Stanford, since 1892.

GEORGE ARCHIBALD CLARK, Academic Secretary.

B. L., Minnesota, 1891. Secretary, U. S. Fur Seal Commission, 1896-98; Assistant, Department of Commerce and Labor, in charge of fur seal investigation on the Pribilof Islands, 1909. At Stanford, since 1891.

OLIVER MARTIN JOHNSTON, Associate Professor of Romanic Languages.

A. B., Mississippi College, 1890, A. M., 1892; Ph. D., Johns Hopkins, 1896. Principal, Preparatory Department, Mississippi College, 1890-91, Professor of English, 1891-93; Fellow in Johns Hopkins University, 1895-96; Lecturer in French Philology, Bryn Mawr College, 1896-97. At Stanford, since 1897.

DAVID CHARLES GARDNER, Chaplain.

Graduate, Church Divinity School of the Pacific, San Mateo, 1897. Curate, St. James Mission, San Francisco, 1898; Rector of All Saints Church, Palo Alto, 1898-1902. At Stanford, since 1902.

†WILLIAM FREEMAN SNOW, Associate Professor of Hygiene.

A. B., Stanford, 1896, A. M., 1897; M. D., Cooper Medical College, 1900. Student, Johns Hopkins Medical School, 1901-02; Secretary, California State Board of Health, 1909-11. At Stanford, since 1901.

HANS FREDERICK BLICHFELDT, Associate Professor of Mathematics.

A. B., Stanford, 1896; Ph. D., Leipzig, 1898. At Stanford, since 1898.

GEORGE THOMAS CLARK, Librarian.

B. S., California, 1886. Assistant Librarian, University of California, 1886-87; Deputy State Librarian, California State Library, 1887-90, Classifier, 1890-94; Librarian, San Francisco Public Libary, 1894-1907. At Stanford, since 1907.

FREDERICK JOHN ROGERS, Associate Professor of Physics.

M. S., Cornell, 1891. Instructor in Physics, Cornell University, 1892-1900. At Stanford, since 1900.

KARL G. RENDTORFF, Associate Professor of German.

A. M., Stanford, 1894, Ph. D., 1896. Student, University of Giessen, 1884-85, University of Kiel, 1885-91. At Stanford, since 1894.

*Second semester, 1910-11.
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RAYMOND MACDONALD ALDEN, Associate Professor of English.

A. B., Pennsylvania, 1894; A. M., Harvard, 1896; Ph. D., Pennsylvania, 1898. Instructor in English, Columbia University, Washington (D. C.), 1894-95; Assistant in English, Harvard University, 1896-97; Senior Fellow in English, University of Pennsylvania, 1898-99, Instructor, 1899-1901; Instructor in English Literature, University of Chicago, Summer Session, 1910. At Stanford, since 1901.

WILLIAM ALPHA COOPER, Associate Professor of German.

A. B., Marietta, 1892, A. M., 1897. Student, Universities of Bonn, Leipzig, and Paris, 1892-94; Instructor in German and French, Marietta College, 1895-99, Professor, 1899-1901. At Stanford, since 1901.

WILLIAM RANKINE ECKART, Associate Professor of Mechanical Engineering.

M. E., Cornell, 1895. Mechanical Engineer, Siemens Halske Electric Co., Chicago, 1895-96; Construction Engineer, Allison Ranch Mine, Grass Valley (Cal.), 1896-98; Testing Work for Fraser & Chalmers, in Hawaii and Mexico, 1898-99; with W. R. Eckart, Consulting Engineer, Hydraulic Power Plants and Mining Work, 1899-1903, summers of 1904-08; Consulting Engineer, Geary St. P. & O. R. R., San Francisco, 1902-06. At Stanford, since 1903.

HALCOTT CADWALADER MORENO, Associate Professor of Applied Mathematics.

A. B., University of Georgia, 1893, A. M., 1894, B. L., 1896; Ph. D., Clark, 1900. Tutor in Mathematics, University of Georgia, 1893-97; Scholar and Fellow in Mathematics, Clark University, 1897-1900, Assistant in Mathematics, Clark University, 1900-01. At Stanford, since 1901.

JOSEPH WALTER BINGHAM, Associate Professor of Law.

A. B., Chicago, 1902, J. D., 1904. In practice of law, Chicago, 1904-05; Acting Assistant Professor of Law, Cornell University, 1905-07. At Stanford, since 1907.

SIDNEY DEAN TOWNLEY, Associate Professor of Applied Mathematics and Astronomy.

B. S., Wisconsin, 1890, M. S., 1892; D. Sc., Michigan, 1897. Fellow in Astronomy, University of Wisconsin, 1890-91, Assistant in Astronomy and Mathematics, 1891-92; Hearst Fellow in Astronomy, University of California (Lick Observatory), 1892-93; Instructor in Astronomy, University of Michigan, 1893-95, 1896-98; Student, Universities of Berlin and Munich, 1895-96; Instructor in Practical Astronomy, University of California, 1898-1903, Lecturer in Astronomy, 1904-07; Astronomer in charge of International Latitude Observatory, 1903-07. At Stanford, since 1907.

EDWARD BENJAMIN KREHBIEL, Associate Professor of History.

A. B., Kansas, 1902; Ph. D., Chicago, 1906. Graduate Student, University of Chicago, 1902-06, Fellow, 1903-05, Assistant, 1904-06; Graduate Student, Harvard University, 1904; Student, Ecole de Chartes, Paris,

1905; Instructor, University of Chicago High School, 1905-06; Associate in History, University of Chicago, 1906-07, Instructor, 1907-09. At Stanford, since 1909.

COLBERT SEARLES, Associate Professor of Romanic Languages.

A. B., Wesleyan University, 1895; Ph. D., Leipzig, 1899. Instructor in French and Italian, Indiana University, 1899-1900; Associate Professor of English and Modern Languages, University of Arkansas, 1900-01. At Stanford, since 1901.

JEFFERSON ELMORE, Associate Professor of Latin.

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HARRY ALVIN MILLIS, Associate Professor of Economics.

A. B., Indiana, 1895, A. M., 1896; Ph. D., Chicago, 1899. Reference Librarian, John Crerar Library, Chicago, 1899-1902; Professor of Economics and Sociology, University of Arkansas, 1902-03. At Stanford, since 1903.

AUSTIN FLINT ROGERS, Associate Professor of Mineralogy and Petrography.

A. B., Kansas, 1899, A. M., 1900; Ph. D., Columbia, 1902. Assistant in Mineralogy, University of Kansas, 1898-1900; Assistant Geologist, University Geological Survey of Kansas, 1898-1900, 1903; Fellow in Mineralogy, Columbia University, 1900-02, Tutor in Mineralogy, 1902-05. At Stanford, since 1905.

JOHN OTTERBEIN SNYDER, Associate Professor of Zoology.

A. B., Stanford, 1897, A. M., 1899. Assistant U. S. Fish Commission, 1897, 1899, 1904; Naturalist on U. S. S. Albatross engaged in deep sea investigations, 1902, 1906. At Stanford, since 1897.

CLARA S. STOLTENBERG, Associate Professor of Physiology.

A. B., Stanford, 1896, A. M., 1897. At Stanford, since 1896.

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A. B., Stanford, 1899, A. M., 1902. Acting Professor of Botany, University of Idaho, 1899-1900; Assistant in Botany, Stanford, 1900-02, Instructor, 1902-04; Fellow in Botany, Columbia University, 1904-05; Assistant Curator, Division of Plants, United States National Museum, 1905-06. At Stanford, 1900-04, and since 1906.

PERCY ERWIN DAVIDSON, Associate Professor of Education.

A. B., Stanford, 1898; A. M., Harvard, 1905. Teacher, Grammar and High Schools, San Diego (Cal.), 1898-1900; Supervisor of History and English Teaching, San Francisco State Normal School, 1900-03; Assistant in Education, San Diego State Normal, 1903-04; Graduate Student, Teachers' College, Columbia University, 1905-07; Instructor in Logic and History of Education, New York Training School for Teachers, 1906-07. At Stanford, since 1907.

RUFUS CLARENCE BENTLEY, Associate Professor of Education.

A. B., Nebraska, 1894, A. M., 1896. Assistant in Psychology, University of Nebraska, 1893-96; Principal of Schools, Shelton (Neb.), 1896-97;

Principal of High School, Martinez (Cal.), 1897-98; Principal of High School and Supervising Principal of Schools, San Rafael (Cal.), 1898-1900; Fellow, Columbia University, 1900-01; Fellow, Clark University, 1901-03; Dean of Clark College, 1902-09, Professor of Latin, 1902-04, Professor of Pedagogy, 1904-09.

*NOAH FIELDS DRAKE, Associate Professor of Economic Geology.

C. E., Arkansas University, 1888; A. B., Stanford, 1894, A. M., 1895, Ph. D., 1897. Secretary and Manager, Tientsin Land Investment Co., Limited, 1901-02; Consulting Geologist, American-China Development Co., 1902-04; Professor of Geology and Mining, Imperial Pei Yang University, Tientsin, China, 1898-1900, and 1905-11.

DAVID MORRILL FOLSOM, Associate Professor of Mining.

A. B., Stanford, 1902, Engineer, 1904. Student Columbia School of Mines, 1902-03; Engineer with Boston and Montana Consolidated Copper and Silver Mining Co., 1904-09.

GALEN HOWELL CLEVENGER, Associate Professor of Metallurgy.

B. S., South Dakota School of Mines, 1901, E. M., 1908; A. M., Columbia, 1903. Superintendent and Proprietor Tailings Plant Operating Cyanide Process, Rapid City (S. D.), 1899-1901; Assayer and Chemist, Dakota Mining Co., Deadwood (S. D.), 1901-02; Research Metallurgist, National Smelting Co., Rapid City (S. D.), and Horseshoe Mining Co., Terry (S. D.), 1903-04; Special Assistant, U. S. Geological Survey, in charge of Electric Smelting Experiments at Portland (Or.), 1904-05; Consulting Metallurgical Engineer for companies operating in the United States, Mexico, and Central America; Special Study of Hydro-Metallurgical Methods in Mexico, 1906-09. At Stanford, 1904-06, and since 1909.

PAYSON JACKSON TREAT, Associate Professor of History.

A. B., Wesleyan, 1900; A. M., Columbia, 1903; Ph. D., Stanford, 1910: Instructor in History, Barnard School, New York City, 1900-03; Graduate Student, Leland Stanford Jr. University, 1903-05; Research Student in Far East, 1906-07; Instructor in Government, Harvard University, 1908-09. At Stanford, since 1905.

†JAMES ROLLIN SLONAKER, Assistant Professor of Physiology.

B. S., Wisconsin, 1893; Ph. D., Clark, 1896. Fellow in Biology, Clark University, 1893-96; United States Fish Commission, Woods Holl (Mass.), summer, 1895; Instructor in Zoology, Indiana University, 1896-99, Indiana University Biological Station, 1896-1900; Assistant Professor of Zoology, Indiana University, 1899-1901; Research Assistant in Neurology, University of Chicago, 1901-02, Associate in Neurology, 1902-03. At Stanford, since 1903.

‡SAMUEL SWAYZE SEWARD, JR., Assistant Professor of English.

A. B., Columbia, 1896, A. M., 1897. Scholar in Literature, Columbia University, 1896-97. Assistant in Literature, 1897-99; Student, Oxford University, 1899-1900; Acting Professor of English, University of Nevada, 1907; Assistant Professor of English, University of California,

*Beginning August, 1911.
†Absent on leave, second semester, 1910-11.
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summer session, 1907, University of Oregon, summer session, 1908. At Stanford, since 1900.

BENJAMIN OLIVER FOSTER, Assistant Professor of Latin.

A. B., Stanford, 1895; A. M., Harvard, 1897, Ph. D., 1899. Parker Fellow of Harvard University, studying in the American School of Classical Studies in Rome, 1899-1900; Acting Professor of Latin and Greek, State Normal College of Michigan, 1900-01; Instructor, University of California, Summer Session, 1908. At Stanford, since 1901.

HENRY LEWIN CANNON, Assistant Professor of History.

A. B., Western Reserve, 1893; Ph. D., Pennsylvania, 1898. Student, Harvard University, 1893-94, Yale University, 1896-97; Fellow in European History, University of Pennsylvania, 1897-98; Instructor in History, University of Cincinnati, 1900-03. At Stanford, since 1903.

†HOWARD JUDSON HALL, Assistant Professor of English.

B. S., Michigan State Agricultural College, 1890; A. B., Stanford, 1896; A. M., Harvard, 1900. Professor of English and Librarian, University of Arizona, 1891-1904. At Stanford, since 1904.

MACY MILLMORE SKINNER, Assistant Professor of German.

A. B., Harvard, 1894, A. M., 1895, Ph. D., 1897. Harvard Fellow, University of Strassburg, 1897-98, University of Berlin, 1898-99; Instructor in German, Harvard University, 1899-1905. At Stanford, since 1905.

ELMER REGINALD DREW, Assistant Professor of Physics.

B. S., California, 1888; Ph. D., Cornell, 1903. Student, University of Chicago, 1897-98, University of Berlin, 1903-05; Assistant in Physics, University of California, 1889-92, Instructor, 1892-1902. At Stanford, since 1905.

LEE EMERSON BASSETT, Assistant Professor of English.

A. B., Stanford, 1901. Graduate, Cumnock School of Oratory, Los Angeles, 1898; Instructor in Public Speaking, University of Southern California, 1898-99; Student, School of Expression, Boston, 1901; Student, Department of Literature, University of Chicago, summer, 1904; Student at Oxford, 1907-08. At Stanford, since 1901.

ERNEST WHITNEY MARTIN, Assistant Professor of Greek.

A. B., Chicago, 1900; A. M., Stanford, 1902, Ph. D., 1910. Instructor in Latin and Greek, Private School, Clarinda (Ia.), 1895-96, Principal of High School, 1896-98; Student, University of Berlin, and American School of Classical Studies, Rome, 1900-01; Acting Professor of Latin and Greek, University of Nevada, 1908-09, Professor of Greek, 1909-10. At Stanford, since 1901.

HENRY DAVID GRAY, Assistant Professor of English.

Ph. B., Colgate, 1897; A. M., Columbia, 1898, Ph. D., 1904. Assistant in German and French, Colgate Academy, 1896-97: University Scholar, Columbia University, 1898-1900; Instructor in Dramatic Literature, American Academy of Dramatic Arts, 1900-02; Instructor in English, University of Texas, 1902-05; Lecturer in English, Columbia University, Summer Session, 1905. At Stanford, since 1905.

WILLIAM DINSMORE BRIGGS, Assistant Professor of English.

A. B., Stanford, 1896; A. M., Harvard, 1899, Ph. D., 1900. Student, Johns Hopkins University, 1896-97; Instructor in English and German,

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University of Vermont, 1900-01; Instructor in English, Western Reserve University, 1901-06. At Stanford, since 1906.

JOHN EZRA McDOWELL, Assistant Registrar.

A. B., Stanford, 1900. At Stanford, since 1900.

CLIFFORD GILMORE ALLEN, Assistant Professor of Romanic Languages.

A. B., Boston, 1900; A. M., Stanford, 1903; Docteur de l'Université de Paris, 1906. Student, University of Paris, 1903-04; Fellow of Boston University and Student of Universities of Paris and Madrid, 1904-05. At Stanford, since 1901.

†WILLIAM ALBERT MANNING, Assistant Professor of Mathematics.

A. B., Willamette University, 1900; A. M., Stanford, 1902, Ph. D., 1904. Acting Assistant Professor of Mathematics, University of Illinois, 1909-10. At Stanford, since 1900.

†JOSEPH GRANT BROWN, Assistant Professor of Physics.

A. B., Stanford, 1901, A. M., 1903. Graduate, Illinois State Normal University, 1894, Instructor in Physics and Chemistry, 1894-98. At Stanford, since 1900.

ALBERT LÉON GUÉRARD, Assistant Professor of French.

B. A., Paris, 1898; Agrégé de l'Université de France, 1906. Traveling Scholarship in England, 1901-03; Junior Professor of French Literature and Examiner in History, State Normal School, Paris, 1904-06; Instructor in the Romanic Languages, Williams College, 1906-07. At Stanford, since 1907.

EVELYN WIGHT ALLAN, Dean of Women.

B. S., St. Lawrence University, 1891; A. B., Stanford, 1896. Teacher in Montclair (N. J.), High School, 1892-95; Teacher of English, Jersey City High School, 1897-99; Graduate Student at Columbia University, 1907; Teacher of English, Manual Training High School, Brooklyn (N. Y.), 1899-1908. At Stanford, since 1908.

EDWIN CHAPIN STARKS, Assistant Professor of Zoology.

Assistant in United States Bureau of Biological Survey, 1897-99; Curator of the Museum and Assistant Professor of Zoology, University of Washington, 1899-1900. At Stanford, since 1900.

SAMUEL BARCLAY CHARTERS, JR., Assistant Professor of Electrical Engineering.

M. E., Cornell, 1904. Delegate International Electrical Congress, St. Louis Exposition, 1904; with Westinghouse Electric & Mfg. Company, Pittsburgh (Pa.), 1904-05. At Stanford, since 1905.

EVERETT PARKER LESLEY, Assistant Professor of Mechanical Engineering.

A. B., Stanford, 1897; M. M. E., Cornell, 1905. Apprentice and Foreman in Union Iron Works, San Francisco, 1897-1903. Assistant Inspector to Naval Constructor, 1903-04; Draftsman at U. S. Experi-

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mental Model Basin, Washington (D. C.), 1905-07. At Stanford, since 1907.

ROBERT BARTHOLOW HARSHE, Assistant Professor of Graphic Art.

B. L., Missouri, 1899. Graduate Student, University of Missouri, 1899-1901; Student Chicago Art Institute, 1901-02; Supervisor Manual Arts, Columbus (Ga.), 1902; Instructor, Summer School of the South, 1903; Manual Training Scholar, Teachers' College, Columbia University, 1903-04; Scholar, Ipswich Summer School, 1904, Art Students' League, 1904-05; Instructor, University of Missouri, 1905-06; Instructor, New York School of Industrial Art, 1906-07; Director, Nantucket Summer School of Design, 1907; Instructor, University of California, Summer Session, 1910. At Stanford, since 1907.

†GEORGE HOLLAND SABINE, Assistant Professor of Philosophy.

A. B., Cornell, 1903, Ph. D., 1906. Sage Fellow in Philosophy, Cornell University, 1905-06, Assistant in Philosophy, 1906-07; Acting Assistant Professor of Logic and Metaphysics, Cornell University, 1910-11. At Stanford, since 1907.

MARY ISABEL McCRACKEN, Assistant Professor of Bionomics.

A. B., Stanford, 1904, A. M., 1905, Ph. D., 1908. At Stanford, since 1904.

RENNIE WILBUR DOANE, Assistant Professor of Entomology.

A. B., Stanford, 1896. Assistant in Zoology and Botany, Washington State College, 1896-99; Assistant Professor of Zoology and Entomology, 1899-1901; Superintendent Fisheries Experiment Station, Keyport, (Wn.), 1901-03. At Stanford, since 1905.

WALTER KENRICK FISHER, Assistant Professor of Zoology.

A. B., Stanford, 1901, A. M., 1903, Ph. D., 1906. Assistant, U. S. Biological Survey, 1897-1901, 1903; Assistant, U. S. Fish Commission, 1902. At Stanford, since 1902.

JOHN PEARCE MITCHELL, Assistant Professor of Chemistry.

A. B., Stanford, 1903, A. M., 1904, Ph. D., 1909. Student, University of Leipzig, 1904-05. At Stanford, 1903-04, and since 1905.

LEONAS LANCELOT BURLINGAME, Assistant Professor of Botany.

Ph. B., Ohio Northern University, 1901; A. B., Chicago, 1906, Ph. D., 1908. Instructor in Biology, Ohio Northern University, 1901-04; Fellow in Botany, University of Chicago, 1906, Assistant, 1906-08. At Stanford, since 1908.

ROYCE REED LONG, Director of Physical Training.

A. B., Stanford, 1908. Physical Director, Young Men's Christian Association, Dixon (Ill.), 1897-98, Aurora (Ill.), 1899-1900; Assistant in Encina Gymnasium, 1902-04; Director of Vanderbilt University Gymnasium, 1904-06. At Stanford, since 1906.

WILLIAM ARTHUR HILLEBRAND, Assistant Professor of Electrical Engineering.

A. B., Cornell, 1905. Student, Stanford, 1905-06; with Western Elec-

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tric Company, San Francisco and Los Angeles, 1906-07. At Stanford, since 1907.

LUTHER WILLIAM BAHNEY, Assistant Professor of Metallurgy.

Ph. G., California, 1897. Instructor in Chemistry and Microscopy, Department of Pharmacy, University of California, 1898-1900; Sampler, Copper King Mine Company, 1900-01; Student in Chemistry with L. Falkenau, 1901-02; Chemist and Chief Assayer, Selby Smelting and Lead Company, 1902-06; Manager of Xitinga Mines, Mexico, 1906. At Stanford, since 1907.

LEWIS MADISON TERMAN, Assistant Professor of Education.

A. B., Indiana, 1902, A. M., 1903; Ph. D., Clark University, 1905. Fellow in Psychology and Education, Clark University, 1903-05; Principal of High School, San Bernardino (Cal.), 1905-06; Head of Department of Child Study and Pedagogy, Los Angeles State Normal School, 1906-10; Instructor in Education, Indiana University, Summer Session, 1909. At Stanford, since 1910.

ERNEST WILLIAM PONZER, Assistant Professor of Applied Mathematics.

B. S., Illinois, 1900, M. S., 1903. Instructor in Mathematics, University of Illinois, 1900-09. At Stanford, since 1909.

FRANK ELLSWORTH BLAISDELL, Assistant Professor of Applied Anatomy.

M. D., Cooper Medical College, 1889. Demonstrator of Anatomy, Cooper Medical College, 1903, Instructor in Biology and Embryology, 1900-09, in Histology, 1907-09, Assistant Professor of Anatomy, 1904-05, Associate Professor, since 1907. At Stanford, since 1910.

ERNEST CHARLES DICKSON, Assistant Professor of Pathology.

A. B., Toronto, 1904, M. B., 1906. Assistant Demonstrator in Physiology, including Physiological Chemistry and Pharmacology, University of Toronto, 1904-05, George Brown Research Scholar, 1906-07; Interne, Toronto General Hospital, 1907, Assistant Demonstrator in Pathology, in charge of Clinical Laboratory, 1907; Assistant Resident Physician, Johns Hopkins Hospital, 1907-08; Instructor in Pathology and Bacteriology, Cooper Medical College, since 1908. At Stanford, since January, 1911.

AURELIO MACEDONIO ESPINOSA, Assistant Professor of Spanish.

A. B., Colorado, 1902, A. M., 1902; Ph. D., Chicago, 1909. Assistant in Romance Languages, University of Colorado, 1901-02, Instructor, Summer Terms, 1904, 1905; Professor of Modern Languages, University of New Mexico, 1902-06; Instructor in Spanish, University of Chicago, Summer Quarters, 1907, 1908, 1909, Fellow in Romance Languages, 1908-09; Professor of Romance Languages, University of New Mexico, 1906-10. At Stanford, since 1910.

BRUNO BOEZINGER, Assistant Professor of German.

A. B., Forth Worth University, 1894, A. M., 1895; Ph. D., Stanford, 1910. Instructor in German, North Texas Normal School, 1895-98; Principal, German Department, San Antonio (Texas) H. S., 1899-1906; Instructor in German, Summer School, University of Texas, 1896. At Stanford, since 1906.

*EDGAR EUGENE ROBINSON, Assistant Professor of History.

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CLELIA DUEL MOSHER, Director of Roble Gymnasium.

A. B., Stanford, 1893, A. M., 1894; M. D., Johns Hopkins, 1900. Assistant in Hygiene and Physical Training, Stanford, 1893-94, Instructor, 1894-96; Externe in the Johns Hopkins Hospital Dispensary, and Gynecological Assistant in Dr. Kelly's Sanatorium, Baltimore (Md.), 1900-01; Physician, Palo Alto, 1901-10. At Stanford, 1893-96, and since 1910.

SUSAN BROWN BRISTOL, Appointment Secretary.

A. B., Stanford, 1897. At Stanford, since 1900.

EDWARD JOHN STANLEY, Instructor in Pattern Making.

Machinist with Pacific Iron Works, San Francisco, 1879, Blacksmith, 1880, Draughtsman, 1881, Pattern Maker, 1883-86; Third Assistant Engineer, Steamer Alabama, 1882; Foreman Pattern Maker, Union Iron Works, San Francisco, 1886-1901, 1906. At Stanford, since 1901.

JAMES BENNETT LIGGETT, Instructor in Foundry Practice.

Apprentice and Foundry Moulder, Falls Rivet and Machine Co., Cuyahoga Falls (Ohio), 1883-88, Webster, Camp & Lane, Akron (Ohio), 1888-93, Bowler & Co., Cleveland (Ohio), 1893-98, Cleveland Steel Casting Co., 1898-99; Foreman, Born Steel Range Co., Cleveland (Ohio), 1899-1902, Westinghouse Electric Co., Cleveland (Ohio), 1902. At Stanford, since 1902.

CHLOE LESLEY STARKS, Instructor in Graphic Art.

At Stanford, since 1899.

THERON J. PALMATEER, Instructor in Machine Shop Practice.

Apprentice with Sibley & Ware, South Bend (Ind.); Journeyman Machinist, 1896-1905, with R. Hoe & Co., New York, Columbus Machine Works, Columbus, O., Elems Engineering Works, Chicago, Western Gas Engine Works, Mishawaka, Ind., Webster Iron Works, Bakersfield, Cal., R. S. Hunkins, San Jose, Cal. At Stanford, since 1904.

LAWRENCE EDMINSTER CUTTER, Instructor in Mechanical Engineering.

A. B., Stanford, 1906. Machinist Apprentice and Journeyman, Union Iron Works, San Francisco, 1895-99, 1899-1902, 1903, 1904, Draftsman, 1905, 1906. At Stanford, since 1906.

CHARLES NORMAN CROSS, Instructor in Mechanical Engineering.

M. E., Cornell, 1906. Assistant Engineer, Long Island State Hospital, Brooklyn (N. Y.), 1905; Dynamo and Switchboard Attendant with the New York Edison Co., New York City, 1905-06; Electrician with the Lackawanna Steel Co., Buffalo (N. Y.), 1906. At Stanford, since 1906.

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WILLIAM HENRY SLOAN, Instructor in Chemistry.

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THERESA PEET RUSSELL, Instructor in English.

Ph. B., Iowa, 1895. Teacher in Denison Normal School, 1895-96; Principal, Vilisca High School, 1896-98; Graduate Student at Radcliffe College, 1898-99; Teacher in Anamosa High School, 1899-1900. At Stanford, since 1905.

HERMANN HILMER, Instructor in German.

A. B., Michigan, 1904; A. M., Columbia, 1905. Assistant in German, University of Wisconsin, 1905-06; Student, University of Leipzig, 1906-07. At Stanford, since 1907.

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Blacksmith with Risdon Iron Works, San Francisco, 1898-1901, 1903-04; with Hammond Car and Elevator Company, San Francisco, 1901-02, 1904-05; with National Iron Works, San Francisco, 1902-03; with Abner Doble Steel Company, San Francisco, 1905-06, Foreman of Forge Shop, 1906-07. At Stanford, since 1907.

JOHN KESTER BONNELL, Instructor in English.

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PERCY ALVIN MARTIN, Instructor in European History.

A. B., Stanford, 1902, A. M., 1903; A. M., Harvard, 1907. Student, University of Paris, 1903-04, Universities of Berlin and Leipzig, 1907-08; Fellow, Harvard University, 1908; Professor of History and French, Whittier College, 1904-05. At Stanford, since 1908.

FRANK OAKES ELLENWOOD, Instructor in Mechanical Engineering.

A. B., Stanford, 1904. With Construction Department of C. C. Moore & Co., San Francisco, 1904; Machine Shop, Tonopah Railroad Co., Tonopah (Nev.), 1905; Draughtsman, American Smelting and Refining Co., South San Francisco, 1906. At Stanford, since 1908.

CHARLES MOSER, Instructor in Civil Engineering.

C. E., Ohio Northern University, 1902; A. B., Stanford, 1908. At Stanford, since 1908.

ALMON EDWARD ROTH, Student Adviser.

A. B., Stanford, 1909. At Stanford, since 1909.

HENRY WILFRED MALONEY, Instructor in Physical Training.

Graduate, Army Gymnastic School, Curragh, Ireland, 1899. Sergeant-Instructor in Gymnastics and Fencing, British Army, 1899-1903; Conductor of Private Gymnasium, Pasadena (Cal.), 1904-08. At Stanford, since 1908.

PHILIP ARNOLD KNOWLTON, Instructor in Latin.

A. B., Wisconsin, 1906, A. M., 1908. Graduate Scholar in Greek, University of Wisconsin, 1906-07, in Philosophy, 1907-08; Teacher of Latin and English, Chico (Cal.), H. S., 1908-09. At Stanford, since 1909.

EVERETT WALLACE SMITH, Instructor in English.

A. B., Stanford, 1899. At Stanford, since 1910.

PERLEY ASON ROSS, Instructor in Physics.

A. B., Stanford, 1908, A. M., 1910. At Stanford, since 1908.

GEORGE FRANCIS McEWEN, Instructor in Applied Mathematics.

A. B., Stanford, 1908. At Stanford, since 1908.

IRA BROWN CROSS, Instructor in Economics.

A. B., Wisconsin, 1905, A. M., 1906; Ph. D., Stanford, 1909. University Scholar in Economics, University of Wisconsin, 1905-06; Special Agent for Wisconsin Tax Commission, 1904-06; Special Agent for U. S. Immigration Commission, 1908-09. At Stanford, since 1906.

†JESSE BRUNDAGE SEARS, Instructor in Education.

A. B., Stanford, 1909. Instructor in Education, University of Wisconsin, 1909-10.

EDITH R. MIRRIELEES, Instructor in English.

A. B., Stanford, 1907. At Stanford, since 1909.

‡JOHN ROTHWELL PEMBERTON, Instructor in Geology.

A. B., Stanford, 1909.

RUSKIN M. LHAMON, Instructor in Anatomy.

A. B., Missouri, 1907; M. D., Washington University, St. Louis, 1910. Assistant in Zoology, University of Missouri, 1906-07. At Stanford, since 1910.

CHARLES ALEXANDER GÜERARD, Instructor in Romanic Languages.

A. B., University of Paris, 1876. Private Classical Coach to French College and Government Schools, 1880-93; Instructor in English, St. Croix College, Paris, 1893-1903; Professor in the Evening Schools of the Polytechnic Association of Paris, 1880-1907; Graduate Assistant in French, University of Washington, 1909-11.

§EUGENE CRITTENDEN TEMPLETON, Instructor in Geology.

A. B., Stanford, 1910.

*FRANK WALTER WEYMOUTH, Instructor in Physiology.

A. B., Stanford, 1909, A. M., 1911. Acting Instructor in Physiology, 1910-11.

*GEORGE SHAMBAUGH BOHART, Instructor in Chemistry.

*HARRY JOHNSON SEARS, Instructor in Chemistry.

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†Absent on leave, 1910-11.
‡Resigned December, 1910.
§Beginning January, 1911.
*Beginning August, 1911.

*HENRY VARNUM POOR, Instructor in Drawing.

A. B., Stanford, 1910.

*ROBERT EDOUARD PELLISSIER, Instructor in Romanic Languages.

B. S., Harvard, 1904, A. M., 1909. Instructor in Romanic Languages, Stanford, 1909-10; Shattuck Scholar in Romance Languages, Harvard University, 1910-11.

JAMES IRA WILSON McMURPHY, Acting Instructor in Systematic Botany.

A. B., Stanford, 1908, A. M., 1909. At Stanford, since 1908.

THOMAS BUCK HINE, Acting Instructor in Chemistry.

A. B., Stanford, 1910.

PAUL HERMAN WALDRAFF, Acting Instructor in Chemistry.

A. B., Stanford, 1910.

WILLIAM RAMSAY DOWS RANDALL, Acting Instructor in Hygiene.

A. B., Stanford, 1906.

ALVIN THEODORE SCHWENNESEN, Acting Instructor in Mining.

A. B., Stanford, 1910.

*ALICE RUTH BERGER, Acting Instructor in Chemistry.

A. B., Stanford, 1908.

LECTURERS

LUTHER BURBANK, Lecturer on Plant Evolution.

MORRIS ELMER DAILEY, Lecturer in Education.

A. M., Indiana, 1897; LL. D., Drake, 1901. Superintendent of City Schools, Fresno (Cal.), 1897-99; Vice-President and Teacher of History, San Jose State Normal School, 1899-1900, President since 1900.

JOHN SLATER PARTRIDGE, Lecturer in Law.

A. B., California, 1892, A. M., 1894. Instructor in Latin, Lowell High School, San Francisco, 1893-97; Assistant City Attorney, San Francisco, 1904-05.

CHARLES EDWARD JEFFERSON, Raymond F. West Lecturer on Immortality.

B. S., Ohio Wesleyan, 1882; S. T. B., Boston, 1887; D. D., Oberlin, 1898, Union, 1898, Yale, 1903. Superintendent Public Schools, Worthington (O.), 1882-84; Pastor Central Church, New York, 1887-98, Broadway Tabernacle, since 1898.

ERNEST DAENELL, Lecturer in History.

Professor of Modern History, University of Kiel.

*Beginning August, 1911.

ASSISTANTS

[[1]First semester; [2]second semester.]

Greek

BLANCH RIBLE.
A. B., Stanford, 1910.

Latin

ESTHER JEAN SPENCER.
A. B., Stanford, 1907, A. M., 1909.

Germanic Languages

NETTA HAFFNER HILMER.
B. S., Michigan, 1895; A. M., Wisconsin, 1906. Assistant Principal H. S., Seymour, Wis., 1895-96; Instructor in Chemistry, Mt. Holyoke College, 1896-98; Student, University of Leipzig, 1899-1900; Principal H. S., Sturgis, Mich., 1900-04; Graduate Student, University of Wisconsin, 1904-06; Teacher of German, Wisconsin Academy, Madison, Wis., 1904-05; W. F. Allen Scholar in Germanic Philology, University of Wisconsin, 1905-06.

Romanic Languages

FREDERICK POPE ANDERSON.
SOPHIE BOEZINGER.
Graduate State Normal, Neuchatel, Switzerland, 1875.
HENRY HAXO.
A. B., Stanford, 1910.

English

BRUCE ORMSBY BLIVEN.
ELISABETH LEE BUCKINGHAM.
A. B., Stanford, 1910.
LILLIE MAY RIBLE.
A. B., Stanford, 1910.
[2]RUSSELL OSBORNE STIDSTON.

Philosophy

FLORENCE MIRIAM WOODHEAD.

Psychology

JOHN EDGAR COOVER.
A. B., Stanford, 1904, A. M., 1905.

Education

EDWARD SAMUEL EVENDEN.
A. B., Stanford, 1910.

FRANCES ELIZABETH SHORT.
A. B., Stanford, 1902.

History

ROBERT LUTHER DUFFUS.
A. B., Stanford, 1910.

WILLIAM EDWARD DUNN.
A. B., University of Texas, 1909; A. M., Stanford, 1910.

CHARLES WILSON HACKETT.
A. B., University of Texas, 1909.

JESSIE RAY HANNA.

NORA WYRTIS McCURDY.

WINNEFRED MILLSPAUGH.

[2]FANNY BELLE RANKIN.

RUTH EDNA ROBERTSON.
A. B., Stanford, 1910.

Economics

LEWIS VINCELL BOYLE, JR.
A. B., Stanford, 1909, A. M., 1910.

GEORGE JUAN HATFIELD.

[2]FRANK MARION RUSSELL.

Graphic Art

HARRIET PARK.

Mathematics

MARY VIRGINIA STUART.

Applied Mathematics

JOHN WATSON FLEMING ARMSTRONG.

MURRAY CHASE AYRES.

EDWIN PRESCOTT BLY.

HARRY CARLETON BURBRIDGE.
A. B., Stanford, 1908.

ARTHUR E. SMOTHERS.
A. B., Northwestern University, 1906.

[2]WILLIAM HENRY THOMAS.

[2]ROMNEY LEIGH VAUGHN.

Physics

ALBERT EDWARD CASWELL.
A. B., Stanford, 1908.

SHIRLEY HYATT.
A. B., Stanford, 1906, A. M., 1908.
JAMES ROWLAND JOHNSON.
GEORGE WILBER MOFFITT.
A. B., University of Iowa, 1910.

Chemistry

GEORGE SHAMBAUGH BOHART.
THOMAS MEREDITH CRAMER.
[2]ROBERT JOHN CROSS.
LOUIS DUNSHEE ELLIOTT.
ELMER R. EWELL.
ARTHUR HENRY MYER.
A. B., Stanford, 1910.
WILLIAM EDWARD PERDEW.
RALPH EDWARD SANBORN.
HARRY JOHNSON SEARS.

Botany

HALLY DELILIA MARY JOLIVETTE.
A. B., University of Wisonsin, 1906, A. M., 1909.

Systematic Botany

[2]ARTHUR DICKIE BORDEN.
JOSEPHINE LOUISE DOWS RANDALL.
A. B., Stanford, 1909.
LOUIS GEORGE STECK.
[2]LUCY YOUSE.
A. B., Indiana University, 1897.

Physiology and Histology

[2]ROSCAL LEROY DRAPER.
[1]JOHN FLOYD PRUETT.
A. B., Stanford, 1909.
KARL LUDWIG SCHAUPP.

Anatomy

[1]FRANCIS STOLLE.
[2]EDWARD GUILFORD CARY.

Bacteriology

ARTHUR RICHARD MEINHART.
GEORGINA BRACKENRIDGE SPOONER.
A. B., Vassar, 1907; A. M., Columbia, 1908.

Pharmacology

E. BRADY.

Hygiene and Physical Training

[2]MAUD CLEVELAND.
B. L., California, 1909. Assistant Dean of Women, University of California, 1909-10; Superintendent of Playgrounds, San Diego, 1910.

JAMES PORTER CRAWFORD.

EDNA GRACE DAVIS.
A. B., Stanford, 1909.

CHARLES MERRILL FULKERSON.

[1]BEN MERRILL HAWES.

FRANK HOWARD HILTON.

ROBERT HAROLD JESSON.

[2]ERNESTO RAY KNOLLIN.

MAUD L'ANPHERE.

EUGENE GARRISON McCANN.

JOSEPHINE LOUISE DOWS RANDALL
A. B., Stanford, 1909.

WILLIAM RAMSAY DOWS RANDALL.
A. B., Stanford, 1906.

MAY SERENA WAYNICK.

JOHN HENRY WIGGINS.

Zoology

SAMUEL STILLMAN BERRY.
A. B., Stanford, 1909; A. M., Harvard, 1910.

[1]WILLIS HORTON RICH.
B. S., Lombard College, 1905; A. B., Stanford, 1909.

Entomology and Bionomics

[1]DAVID TIMMINS FULLAWAY.
A. B., Stanford, 1908.

WILLIAM MONTANA MANN.

[2]ERVAL JACKSON NEWCOMER.

[2]CYRIL E. PEMBERTON.
A. B., Stanford, 1911.

[2]FRANK MARION RUSSELL.

WILLIAM FRANCIS THOMPSON.

Geology and Mining

SADIE KEEN, Clerk.

Civil Engineering

[2]MURRAY CHASE AYRES.
[1]CLARENCE EARL BLEE.
[1]JOHN ELBERT ELLIOTT.
HERMAN ENDRES.
[2]NORMAN MARSHALL HALCOMBE.
[1]RALPH LEON HUGHES, JR.
A. B., Stanford, 1910.
[1]W. BRUCE McMILLAN.
ROBERT ELMER MILLSAP.
MAURICE GIESY PARSONS.
ARTHUR CHARLES SANDSTROM.
SIDNEY BURTON SHAW.
[1]NELSON TAYLOR.
[2]ROMNEY LEIGH VAUGHN.

Mechanical Engineering

CARL HENRY BENSON.
[2]HARRY HARMON BLEE.
A. B., Stanford, 1910.
[1]JOHN BOULWARE BUBB.
A. B., Stanford, 1911.
MYRTIL COLE HAVENS, Assistant Mechanician.
CHAUNCEY TENNENT KEEFER.
VERNE CAMPBELL ORANGE.
WILLIAM CHRISTIAN THEILE.
A. B., Stanford, 1909.
WALTER UHLMAN, Engineer.

Electrical Engineering

FRANK E. CORBALEY.
EUGENE GARRISON McCANN.
THOMAS WILLIAM SNELL.

President's Office

A. RUTH FIELD.
FREDERICK BERTRAM WOOD.
A. B., Stanford, 1910.

Registrar's Office

[2]FREDERICK HAROLD BEACH.
[1]FRED DAN POST, Stenographer.
MARGARET A. POST.

UNIVERSITY LIBRARY

Staff

JOHN EDWARD GOODWIN, Assistant Librarian.

A. B., University of Wisconsin, 1901; B. L. S., New York State Library School, 1905. Classifier and Cataloguer, Madison (Wis.) Free Library, 1901-04; Assistant, Legislative Reference Department, Wisconsin Free Library Commission, 1903.

SYDNEY BANCROFT MITCHELL, Chief of Order Department.

A. B., McGill University, 1901, A. M., 1904. Student, New York State Library School, 1903-04; McGill University Library, 1901-03, 1905-08.

HELEN BINNINGER SUTLIFF, Chief Cataloguer.

A. B., University of Kansas, 1890. Head Cataloguer, University of Kansas Library, 1891-1905; Cataloguer in Columbia University Library, Summer, 1901.

ALICE NEWMAN HAYS, Classifier.

A. B., Stanford, 1896; B. L. S., New York State Library School, 1903. Assistant, Home Education Department, New York State Library, 1901.

†HELEN LATHROP, Reference Librarian.

A. B., Stanford, 1902. Student, New York State Library School, 1905-06; Assistant, Children's Department, Carnegie Library of Pittsburg, 1906-07.

EDITH MARGARET COULTER, Supervisor Serial Department.

A. B., Stanford, 1905; B. L. S., New York State Library School, 1907.

Assistants

MIRA BURNETT BENNETT.

SHERMAN LAWRENCE BLACK.

LUCIA MAY BROOKS.

Cataloguer, University of Minnesota Library, 1905-09.

MARGUERITE BROWN.

JOSEPH PAUL COTTRELL.

MAY FRANKLIN, Cataloguer.

A. B., Stanford, 1907.

ELIZABETH HADDEN, Cataloguer.

ANNA GERTRUDE HALL.

A. B., Stanford, 1906.

FRANCES SOPHIA COURTENAY JAMES.

A. B., University of Wisconsin, 1904, A. M., 1905. Graduate Student, University of Wisconsin, 1905-07; Cataloguer, Wisconsin Historical Library, 1901-07, University of Washington, 1907-08.

†Absent on leave, second semester, 1910-11.

THOMAS POWDERLY MARTIN.
BLANCHE JULIA MOBLEY.
OLLIS WILLARD NEWMAN.
[2]LOUISE OPHÜLS.
CHARLES V. PARK.
A. B., Stanford, 1909.
†MAIDA ROSSITER.
A. B., Cornell University, 1903.
SYLVIA DELLA STINSON.
HAROLD MANLEY TENNANT.
DELLA THOMPSON.
A. B., Stanford, 1909.
HANNAH LILLIAN TODD.
MARY JEANNETTE WOODRUFF, Stenographer.

MEMORIAL CHURCH

GODFREY CARL BUEHRER, Organist.
A. M., Rensselaer College (Indiana), 1896; Mus. Doc. Hon., Santa Clara College, 1907. Student Scola Cantorum, Paris, 1904-06; Instructor of Band, Orchestra, and Choir, Rensselaer College, 1892-96; Instructor, St. Joseph's College, San Jose, 1897-98; Organist, St. Joseph's Church, San Jose, 1899-1908; Professor of Music, Santa Clara College, 1901-05.

LELAND STANFORD JUNIOR MUSEUM

HARRY C. PETERSON, Curator.
Charter Member American Museum Association.

ENCINA HALL

HANS C. NELSON, Chairman of Committee.

ROBLE HALL

SHIRLEY HYATT, Matron.
A. B., Stanford, 1906, A. M., 1908.

†Absent on leave, first semester, 1910-11.

ORGANIZATION

Foundation

The Leland Stanford Junior University was established under an Act of the Legislature, approved March 9, 1885, entitled "An Act to advance learning, the arts and sciences, and to promote the public welfare by providing for the conveyance, holding, and protection of property, and the creation of trusts for the founding, endowment, erection, and maintenance within this State of universities, colleges, schools, seminaries of learning, mechanical institutes, museums, and galleries of art." The Founding Grant, executed November 11, 1885, was made public at a meeting of the Board of Trustees, held in San Francisco, November 14, 1885. The cornerstone of the inner quadrangle was laid May 14, 1887, and the institution opened to students October 1, 1891.

Nature, Object, and Purposes of the University

"We, Leland Stanford and Jane Lathrop Stanford, husband and wife, grantors, desiring to promote the public welfare by founding, endowing, and having maintained upon our estate known as the Palo Alto Farm, and situated in the Counties of San Mateo and Santa Clara, State of California, United States of America, a university for both sexes, with the colleges, schools, seminaries of learning, mechanical institutes, museums, galleries of art, and all other things necessary and appropriate to a university of high degree, to that end, and for that purpose, do hereby grant," etc.

"And that the trust hereby created may be executed according to the wishes of the grantors and each of them, they do hereby designate the Nature, Object, and Purposes of the Institution hereby founded, to be:

"Its nature, that of a University, with such seminaries of learning as shall make it of the highest grade, including mechanical institutes, museums, galleries of art, laboratories, and conservatories, together with all things necessary for the study of agriculture in all its branches, and for mechanical training, and the studies and exercises directed to the cultivation and enlargement of the mind;

"Its object, to qualify students for personal success and direct usefulness in life;

"And its purposes, to promote the public welfare by exercising an influence in behalf of humanity and civilization, teaching the blessings of liberty regulated by law, and inculcating love and reverence for the great principles of government as derived from the inalienable rights of man to life, liberty, and the pursuit of happiness."

Name of the University

"Since the idea of establishing an institution of this kind, for the benefit of mankind, came directly and largely from our son and only child, Leland, and in the belief that had he been spared to advise as to the disposition of our estate, he would have desired the devotion of a large portion thereof to this purpose, we will that for all time to come the institution hereby founded shall bear his name, and shall be known as The Leland Stanford Junior University."

Management and Control of the University

The general management and control of the institution is vested in a Board of Trustees originally numbering twenty-four, and chosen for life. By the Amending Act of May 31, 1899, the number of trustees is reduced to fifteen, with future elections for a term of ten years. The Board of Trustees fills all vacancies.

Powers and Duties of the Trustees

"The Trustees shall have power and it shall be their duty:

"To appoint a President of the University, who shall not be one of their number, and to remove him at will.

"To fix the salaries of the President, Professors, and Teachers, and to fix them at such rates as will secure to the University the services of men of the very highest attainments.

"To establish and maintain at such University an educational system which will, if followed, fit the graduate for some useful pursuit, and to this end to cause the pupils, as early as may be, to declare the particular calling which in life they may desire to pursue. . . .

"To prohibit sectarian instruction, but to have taught in the University the immortality of the soul, the existence of an all-wise and benevolent Creator, and that obedience to His laws is the highest duty of man.

"To have taught in the University the right and advantages of association and coöperation.

"To afford equal facilities and give equal advantages in the University to both sexes.

"To maintain on the Palo Alto estate a farm for instruction in agriculture in all its branches.

"The Board of Trustees shall annually report all their proceedings to the person who for the time being shall fill the office of Governor of the State of California, and shall accompany such report with a full account of their financial operations for the preceding year, and with a statement of the financial affairs of the institution."

Powers and Duties of the President

"It shall be the duty of the Trustees to give to the President of the University the following powers:

"To prescribe the duties of the professors and teachers; to remove professors and teachers at will; to prescribe and enforce the course of study and the mode and manner of teaching; such other powers as will enable him to control the educational part of the University to such an extent that he may justly be held responsible for the course of study therein and for the good conduct and capacity of the professors and teachers."

Amendments to the Founding Grant

A clause in the Founding Grant reserved to the grantors the right to alter, amend, or modify the terms and conditions of the grant in important particulars. Under this provision amendments were made by Mrs. Stanford, June 1, 1897; May 31, 1899; March 28, 1902; October 3, 1902; June 1, 1903. These amendments were concerned mainly with matters of detail, but provided also "that the number of women attending the University as students shall at no time ever exceed five hundred."

An Amendment to the Constitution of the State of California, adopted November 6, 1900. "permitted, approved, and confirmed all the trusts, estates, terms, and conditions" of the Founding Grant and of all the deeds, conveyances, and other instruments made and delivered before that date, and authorized the Legislature, under certain conditions, to exempt the property of the University from taxation.

The University Faculty

"The Trustees shall constitute the President and professors the faculty of the University, and shall prescribe their powers and duties as such."

Under the Articles of Organization, adopted by the Board of Trustees March 31, 1904, the power and authority of the University Faculty is vested in the Academic Council, consisting of the President of the University, the professors and associate professors, the librarian, the registrar, such assistant professors as have been upon the roll of the faculty for three years, whether as assistant professors or instructors, and such other officers of the University or members of the teaching staff as the Academic Council may, with the assent of the Board of Trustees, determine.

All general University regulations, statutes, and rules as to matters within the province of the faculty, must be initiated in and passed by the Academic Council. The Academic Council has general power and responsibility for the internal administration of the University, subject to express provisions contained in the Articles of Organization respecting the methods of exercising such powers through the President of the University, the Advisory Board, the Standing Committees, and the Department Faculties.

The Advisory Board consists of nine members of the rank of professor, one from each of the five department groups, and four chosen without reference to groups. All executive acts of general importance, such as recommendations for appointments, promotions, and dismissals, for the creation of new departments or chairs, etc., must be submitted by the President to the Advisory Board. The Advisory Board is also privileged to make such recommendations to the President, regarding policy, as it may decide by vote to be expedient, but no recommendations for appointments, promotions, or dismissals, may originate with the Advisory Board.

The Executive Committee of the Academic Council consists of the President, Vice-President, Registrar, and two members from each department group elected by the Academic Council. The Executive Committee appoints the Academic Committees of the Council and formulates the duties and controls the policy of Administrative and Academic Committees.

The Standing Administrative Committees of the Council are appointed by the President subject to the approval of the Advisory Board.

The Department Faculties consist of the professors, associate professors, assistant professors, and instructors in the several departments, but only members of the Academic Council have the right to vote. A Department Faculty has direction of the work of instruction in the

department and of the internal administration of the department, subject only to such control as is vested in the Board of Trustees, the President of the University, and the Academic Council. The Executive Head of the Department Faculty is designated by the President with the approval of the Advisory Board and of the Board of Trustees.

Departments

The work of the University embraces the following departments, divided into groups for the purpose of elections to the Advisory Board and Executive Committee, as indicated:

(I) Greek, Latin, Germanic Languages, Romanic Languages, English Literature and Rhetoric, English Philology; (II) Botany, Systematic Botany and Forestry, Physiology and Histology, Hygiene, Zoology, Entomology and Bionomics, Geology and Mining, Medicine; (III) Psychology, Mathematics, Physics, Chemistry; (IV) Philosophy, Education, History, Economics and Social Science, Law; (V) Graphic Art, Applied Mathematics, Civil Engineering, Mechanical Engineering, Electrical Engineering.

The Marine Biological Laboratory, founded by the liberality of Mr. Timothy Hopkins, and located at Pacific Grove, on the Bay of Monterey, is a branch of the biological work of the University.

Location

The University is located on the "Palo Alto Farm" in the Santa Clara Valley, thirty miles southeast of San Francisco, on the Coast Division of the Southern Pacific Railway. The grounds of the University consist of over seven thousand acres, partly level and partly rising into the foothills of the Santa Cruz Range. The Bay of San Francisco lies about three miles east of the University grounds. Across the bay the Monte Diablo Range rises to a height of over four thousand feet, the Lick Observatory crowning Mt. Hamilton, the highest of the range.

The Santa Clara Valley is one of the most attractive portions of the State in climate, in natural beauty, and in the adaptiveness of its soil to all the varied products of California. In winter the mercury rarely falls below 30 degrees, with an average midday temperature of about 55 degrees. In summer the midday temperature ranges between 60 degrees and 80 degrees, with occasional higher and lower numbers, the average being about 70 degrees; the nights are cool, the usual range

being from 50 degrees to 58 degrees. The rainfall, normally about fifteen inches, is chiefly confined to the months from December to April, inclusive.

Buildings

The central group of buildings, constituting two quadrangles, the one surrounding the other, is an adaptation of the Mission Architecture, and reproduces on an imposing scale the open arches, long colonnades, and red tile roofing of the old Spanish Missions of California. The Inner Quadrangle consists of twelve one-story buildings and the Memorial Church, connected by a continuous open arcade, and surrounding a court 586 feet long by 246 feet wide, or three and a quarter acres. The buildings are of buff sandstone, somewhat varied in color, the stonework of broken ashlar, with rough rock-face, and the roofs covered with red tile.

The fourteen buildings of the Outer Quadrangle are constructed of the same material and in the same general style as the Inner Quadrangle. They are also connected on the outer side by open arcades extending entirely around the quadrangle. The extreme length of the Outer Quadrangle is 894 feet.

The Leland Stanford Junior Museum, situated a quarter of a mile from the Quadrangles, on the west side of the Palo Alto Avenue, contains the archæological and art collections of the University.

The Chemistry Building, located between the Quadrangles and the Museum, consists of two separate structures—the main building and the Assaying Laboratory.

Behind the central quadrangles are located the workshops of the Engineering departments, experimental laboratories, power-houses, etc.

The dormitories are east and west of the Quadrangles. Encina Hall, for men, is at the east, and has accommodations for three hundred students. Roble Hall, for women, is at the west, and will accommodate one hundred students. Madroño Hall, a frame building, at present leased to private parties, receives only women students. It will accommodate about thirty students.

Encina Gymnasium and Roble Gymnasium are frame buildings, equipped with the apparatus and appliances for physical training.

The University Inn is a frame building intended primarily as a University commons for students living on the campus.

The grounds immediately about the University have been reserved in part for experimental and ornamental purposes, in part as residence

sites for members of the Faculty and others who may desire to live on the University campus.

Buildings of the Medical Department

The buildings of Cooper Medical College, transferred to the University in 1908, occupy four fifty-vara lots, in San Francisco, bounded by Clay, Webster, and Sacramento streets, and consist of Cooper College, containing laboratories, lecture and clinic rooms, and Lane Hall; Lane Hospital, a modern building in brick and stone with a capacity of one hundred and fifty beds; and the Nurses' Home.

ADMISSION TO THE UNIVERSITY

[For special regulations governing admission of women, see p. 62.]

I. FIRST-YEAR STANDING

Candidates must be at least sixteen years of age. They must present satisfactory recommendations as to personal character, and must offer credentials amounting to fifteen entrance units as indicated below. Women must make formal application in advance on blanks to be furnished by the Registrar (see pp. 62-63).

An *Entrance Unit* represents a subject pursued in the high school for one year, with not less than one hundred and fifty recitation periods of forty-five minutes each, two laboratory periods being counted as the equivalent of one recitation period.

Entrance Subjects

The standard of preparation is the four years' high school course. The proper co-ordination of high school subjects for the individual pupil is regarded as primarily a problem for the secondary school; the University is prepared to recognize for entrance credit any subject having an established place in the secondary school curriculum, in which adequate instruction is given and which is pursued to satisfactory results.

No prescription, other than English, is made. Candidates desiring to study mathematics must obviously offer such elementary mathematics as is not taught in the University, and engineering students are expected to offer also solid geometry and trigonometry. Candidates desiring to study Latin should offer at least two entrance units in that subject. The State law governing the practice of medicine in California prescribes, among other requirements, that the preparatory course of every person practicing medicine or surgery in the State shall have included two years of Latin, two years of mathematics, two years of English, one year of history, two years of laboratory science, and six years of further credits in language, literature, history, or science.

Entrance on Recommendation

Undergraduate standing, without further tests, is granted as follows:

1. To graduates of approved preparatory schools who have completed a regular four years' course, amounting to not less than *fifteen* entrance units, and who are fully recommended to the University.

Full recommendation implies a recommending grade considerably higher than the lowest passing grade, with provision that low passing grades in a particular subject or subjects may be offset by a general high average or by decided intellectual promise. Where subjects have been completed with private tutors, or under other than regular school conditions, the candidate will not be entitled to full recommendation. Where the course of study includes the newer subjects, in which high school standards are not fixed, the quantity and quality of work must be specially evidenced; in music, the candidate will be expected to pass the examinations of the College Entrance Examination Board or similar university examinations.

It is the purpose of the University to emphasize (1) quality of preparation and intellectual promise; (2) personal character and seriousness of purpose. Principals are expected to exact a high standard of scholarship as preliminary to recommendation, and to withhold recommendation from those who are undesirable or unpromising from the point of view of moral qualities or habits.

Approved Preparatory Schools are schools maintaining full four years courses of high school work and accredited (1) by The New England College Entrance Certificate Board, by The North Central Association of Colleges and Secondary Schools, by colleges and universities of recognized standing, or (2) upon inspection undertaken or authorized by the University.

The University records of first-year students will be considered as additional evidence of the standing of preparatory schools and of their good faith and success in meeting the requirements of the University, and such evidence will be made use of in determining as to the continuance of accrediting relations.

2. To recommended graduates of California State Normal Schools, and to graduates of other Normal Schools approved by the California State Board of Education as of equal rank with California State Normal Schools, who are holders of the highest grade diploma issued

by these Normal Schools. (For conditions on which advanced standing may be granted Normal School graduates, see p. 61.)

3. To holders of seventy-two-count Diplomas issued by the Regents of the State of New York, granted *with credit, with great credit,* or *with highest credit.*

4. To candidates from China, Japan, Mexico, and other foreign countries who present credentials showing the satisfactory completion of courses of study equivalent to those of approved American high schools. In Japan such courses of study must extend at least two years beyond graduation from a middle school; in Mexico, graduation from the National Preparatory School or from other preparatory schools maintaining six years courses, will be required. Before admission to the University such candidates must show ability to use, and to understand readily, both written and spoken English; if coming directly from these countries they must ordinarily expect to spend at least one year in an American preparatory school, or under special instruction in English, before being able to meet this test.

Recommendations will be considered at any time of the year, but, since, in general, candidates cannot be assured of admission to the University without examination in one or more subjects, it is important that credentials be forwarded as early as possible.

Blanks for admission on recommendation may be obtained from the Registrar.

Entrance on Examination

Undergraduate standing is granted to candidates who pass entrance examinations in subjects aggregating *fifteen* units, or who supplement partial recommendation by examination in the requisite number of subjects.

The College Entrance Examination Board

In 1911, the entrance examinations of the College Entrance Examination Board will be held June 19-24, at Stanford University and many other places.

All applications for examination must be addressed to the Secretary of the College Entrance Examination Board, Post Office Sub-Station 84, New York, N. Y., and must be made upon a blank form to be obtained from the Secretary of the Board upon application.

Applications for examination at points in the United States east of the Mississippi River, also at Minneapolis, St. Louis, and other points on the Mississippi River, must be received by the Secretary of the

Board at least two weeks in advance of the examinations, that is, on or before Monday, June 5, 1911; applications for examination elsewhere in the United States or in Canada must be received at least three weeks in advance of the examinations, that is, on or before Monday, May 29, 1911; and applications for examination outside of the United States and Canada must be received at least five weeks in advance of the examinations, that is, on or before Monday, May 15, 1911.

Applications received later than the dates named will be accepted when it is possible to arrange for the admission of the candidates concerned, but only upon the payment of $5 in addition to the usual fee.

The examination fee is $5 for all candidates examined at points in the United States and Canada, and $15 for all candidates examined outside of the United States and Canada. The fee (which cannot be accepted in advance of the application) should be remitted by postal order, express order, or draft on New York to the order of the College Entrance Examination Board.

A list of the places at which examinations are to be held by the Board is published about March 1 each year. Requests that the examinations be held at particular points, to receive proper consideration, should be transmitted to the Secretary of the Board not later than February 1.

In these examinations the University will accept a mark of 60 as the lowest passing grade.

A Definition of Requirements in the various subjects in which examinations are held is given in Document No. 48, issued by the Board. (Price, 10 cents: address the Secretary, Post Office Sub-Station 84, New York, N. Y.)

Entrance Examinations by the University

Entrance examinations, in the subjects listed below, are set by the University in August-September, at the beginning of the academic year. Candidates are admitted to these examinations on presenting evidence of systematic preparation in the subjects concerned. Applications should be made to the Registrar, by whom permits will be issued. Special examinations outside of the regular examination days will not ordinarily be granted. In exceptional cases such examinations may be arranged by the Committee on Admission; but a special fee of two dollars will be charged the candidate for each subject in which examination is taken.

ENTRANCE EXAMINATION SCHEDULE, AUGUST, 1911

	August 24	*August 25*	*August 26*	*August 28*
8:15	El. Algebra	Physiology El. French	Physics El. Spanish	Zoology El. Latin
10:15	Adv. Algebra Amer. Hist.	Chemistry Inter. French	Int. Spanish El. German	Biology Adv. Latin
1:30	Pl. Geometry Botany	El. Engl. Lit. Adv. French	English Comp. Int. German	M. & M. Hist. El. Greek
3:30	Solid Geom. Trig. (4:45)	Hygiene English Hist.	Adv. Eng. (*2b, c*) Adv. German	Ancient Hist. Adv. Greek

Examinations passed at other universities of equivalent rank may also be offered for entrance credit.

Specimen examination questions may be obtained on application to the Registrar.

DEFINITION OF REQUIREMENTS

Examinations held by the University are based on the following definition of requirements. Credit on examination will be given as indicated by the unit values attached to the various subjects, except that one entrance unit will be allowed for one year of preparatory work in a second foreign language, where the first has covered two or more years' work.

1. **English Composition.**—The work in English Composition should be given at least two recitations a week throughout the entire high school course. The greater part of this time should be devoted to practice in writing, but it is recommended that some attention be also paid to instruction in the fundamental principles of formal rhetoric.

The examination is to test the candidate's ability to write exercises not only free from marked deficiencies in spelling, punctuation, sentence structure, and paragraphing, but also indicative of his ability to think consecutively on a simple subject. The subjects which are set at the time of the examination will be drawn for the most part from the candidate's own experiences. (1½ units)

NOTE.—All first-year undergraduates (including special students and students coming from other institutions with less than twenty units of advanced credit) will be required to satisfy the University standard in English Composition. This may be done by passing either (1) the regular examination in Entrance Subject 1, or (2) a special Matriculation Test given during matriculation week. Since the latter test is the

exact equivalent of the Entrance Examination, recommended students who find it convenient to take the earlier examination are encouraged to do so.

A student who passes either of the above tests may be exempted from Composition work in the University, or may enter Course 2. A student who does not pass will be required to register in English A, unless, on account of the merits of his paper, the Department assign him to English 2. A student having entrance deficiencies in Composition to make up is required to register in the assigned course at once (unless, by reason of numbers, or by special arrangement, the Department assigns some students to a later semester) and to remain in it until his work is of passing grade.

2. English Literature.—The work in English Literature should be given an average of at least three recitations a week thoughout the four years of the preparatory course. It should be so conducted as to give the student not only an appreciative understanding of the books selected either for general or for more intensive study, but also a knowledge of their place in the history of English Literature, and especially an ability to read aloud intelligently both prose and verse.

2a. Elementary English Literature.—The list of books is that named by the College Entrance Examination Board for use during the year 1912.

Group I (two to be selected):—Shakespeare's As You Like It, Henry V, Julius Cæsar, The Merchant of Venice, Twelfth Night.

Group II (one to be selected):—Bacon's Essays; Bunyan's The Pilgrim's Progress, Part I; The Sir Roger de Coverley Papers in the Spectator; Franklin's Autobiography.

Group III (one to be selected):—Chaucer's Prologue; Spenser's Faerie Queene (Book I); Pope's The Rape of the Lock; Goldsmith's The Deserted Village; Palgrave's Golden Treasury (First Series), Books II and III, with special attention to Dryden, Collins, Gray, Cowper, and Burns.

Group IV (two to be selected):—Goldsmith's The Vicar of Wakefield; Scott's Ivanhoe; Scott's Quentin Durward; Hawthorne's House of the Seven Gables; Thackeray's Henry Esmond; Mrs. Gaskell's Cranford; Dickens' Tale of Two Cities; George Eliot's Silas Marner; Blackmore's Lorna Doone.

Group V (one to be selected):—Irving's Sketch Book; Lamb's Essays of Elia; De Quincey's Joan of Arc and The English Mail Coach; Carlyle's The Hero as Poet, The Hero as Man of Letters, The

Hero as King; Emerson's Essays (selected); Ruskin's Sesame and Lilies.

Group VI (two to be selected):—Coleridge's The Ancient Mariner; Scott's The Lady of the Lake; Byron's Mazeppa and The Prisoner of Chillon; Palgrave's Golden Treasury (First Series), Book IV, with special attention to Wordsworth, Keats, and Shelley; Macaulay's Lays of Ancient Rome; Poe's Poems; Lowell's The Vision of Sir Launfal; Arnold's Sohrab and Rustum; Longfellow's The Courtship of Miles Standish; Tennyson's The Princess; Browning's Cavalier Tunes, The Lost Leader, How They Brought the Good News from Ghent to Aix, Evelyn Hope, Home Thoughts from Abroad, Home Thoughts from the Sea, Incident of the French Camp, The Boy and the Angel, One Word More, Hervé Riel, Pheidippides. (1 unit)

2b. Advanced English Literature.—Preparation should include not only an examination of the significant details in the text, but also a study of the work in its larger outlines—its literary structure, style, and adaptation to its purpose.

(1) Shakespeare's Macbeth; (2) Milton's Comus, L'Allegro, and Il Penseroso; (3) either Burke's Speech on Conciliation with America, or Washington's Farewell Address and Webster's First Bunker Hill Oration; (4) either Macaulay's Life of Johnson, or Carlyle's Essay on Burns. (1 unit)

2c. History of English Literature.—Candidates who offer *2b* may, at their option, offer *2c* in addition. The examination in both subjects will be given in the same period. Preparation should consist in a brief outline of the history of English Literature with a view to making clear the character and the tendencies of the more important literary epochs and associating the chief books and authors in their proper periods. (½ unit)

3-6. **Mathematics.**—The definition of requirements, except in advanced algebra, part II, is that adopted by the College Entrance Examination Board, and is in accordance with recommendations made in 1903 by a committee of the American Mathematical Society.

3a. Elementary Algebra.—The four fundamental operations for rational algebraic expressions. Factoring, determination of highest common factor and lowest common multiple by factoring. Fractions, including complex fractions, and ratio and proportion. Linear equations, both numerical and literal, containing one or more unknown quantities. Problems depending on linear equations. Radicals, including the extraction of the square root of polynomials and of numbers.

Exponents, including the fractional and negative. Quadratic equations, both numerical and literal. Simple cases of equations with one or more unknown quantities, that can be solved by the methods of linear or quadratic equations. Problems depending on quadratic equations. The binomial theorem for positive integral exponents. The formulas for the *n*th term and the sum of the terms of arithmetical and geometric progressions, with applications.

It is assumed that pupils will be required throughout the course to solve numerous problems which involve putting questions into equations. Some of these problems should be chosen from mensuration, from physics, and from commercial life. The use of graphical methods and illustrations, particularly in connection with the solution of equations, is also expected. (1 to 1½ units)

3b. Advanced Algebra I.—Permutations and combinations, limited to simple cases; complex numbers, with graphical representation of sums and differences; determinants, chiefly of the second, third, and fourth orders, including the use of minors and the solution of linear equations; numerical equations of higher degree, and so much of the theory of equations, with graphical methods, as is necessary for their treatment, including Descartes's rule of signs and Horner's method, but not Sturm's functions or multiple roots. (½ unit)

3c. Advanced Algebra II.—An additional unit or half unit may be given in Advanced Algebra for a suitable amount of work upon a connected group of the topics usually included under the heading of advanced or higher algebra, such as the binominal theorem and convergence of series, determinants, the theory of equations, etc.

(½ to 1 unit)

4. Plane Geometry.—The usual theorems and constructions of good text-books, including the general properties of plane rectilinear figures; the circle and the measurement of angles; similar polygons; areas; regular polygons and the measurement of the circle. The solution of numerous original exercises, including locus problems. Applications to the mensuration of lines and plane areas. (1 unit)

5. Solid Geometry.—The usual theorems and constructions of good text-books, including the relation of planes and lines in space; the properties and measurement of prisms, pyramids, cylinders, and cones; the sphere and the spherical triangle. The solution of numerous original exercises, including locus problems. Application to the mensuration of surfaces and solids. (½ unit)

6. Trigonometry.—Definitions and relations of the six trigonometric

functions as ratios; circular measurement of angles. Proofs of principal formulas, in particular for the sine, cosine, and tangent of the sum and the difference of two angles, of the double angle and the half angle, the product expressions for the sum or the difference of two sines or of two cosines, etc.; the transformation of trigonometric expressions by means of these formulas. Solution of trigonometric equations of a simple character. Theory and use of logarithms (without the introduction of work involving infinite series). The solution of right and oblique triangles, and practical applications. (½ unit)

7. **Physics.**—The equivalent of one year's work in the high school, including both laboratory and text-book work. It is preferred that at least one-half the time be given to laboratory work in which the students perform individually such experiments as are described in the better class of laboratory manuals. Accurate notes of the laboratory work should be kept. The text-book study should cover the ground of some modern text.

The desired preparation, both in laboratory and text-book work, is fairly represented by Sanford's Elements of Physics. (1 unit)

8. **Chemistry.**—Besides the usual text-book and recitation work, each student must have a laboratory course in which he performs the experiments for himself. Accurate notes of the laboratory work should be kept. The necessary amount of laboratory work cannot be obtained in less than four hours per week for one school year, in addition to the classroom work. It is preferred that the laboratory work be entirely devoted to illustration of the important facts and principles of general chemistry, rather than partly to analytical chemistry. (1 unit)

Students who receive entrance credit on recommendation, and who wish to continue the study of chemistry in the University, will be admitted at once to course *a* II, and will be required to begin course 1.

9. **Physiology.**—The elements of human physiology and hygiene, the equivalent of Martin's Human Body. The text-book work should be accompanied by experiment, dissection of animals and organs, and a certain amount of study of the tissues with the microscope.

Candidates who have taken only the work in elementary physiology and hygiene done in the grammar or intermediate grades are not prepared to offer the subject for entrance credit. The elementary physiology and hygiene of the grammar grades in this regard is in the same category as are the other subjects studied in the grammar grades, such as arithmetic and geography, which are assumed as preliminary to the subjects offered for entrance. (1 unit)

10. **Botany.**—The requirements outlined by the College Entrance Examination Board (based on the report of the Committee on Botany of the Science Department of the National Educational Association, modified by a committee of the Society for Plant Morphology and Physiology) may be taken to represent approximately what is expected of the candidate for entrance credit in Botany. These requirements call for a full year's work, of which it is expected that at least two-thirds shall be genuine laboratory work. One-half of the year is to be devoted to the general principles of morphology, physiology, and ecology. In this work proper account should be taken of the lower plants as well as of the flowering plants. The second half-year is devoted to a study of the natural history of representatives of the larger groups of plants, and the principles of classification. This study is expected to include representatives of the algæ, fungi, mosses, ferns, and the principal types of flowering plants. If it seems desirable, the order of the two half-years' work may be reversed or combined in a different way. (Stevens's Introduction to Botany may be mentioned as indicating the scope of the work.)

In preparing to meet the requirements in Botany, the main thing to bear in mind is that the work shall be of a practical nature; that the study be mainly specimens and not books. A study of the growth and development of the forms selected is of the highest importance, and should be made a prominent feature in the work.

If possible, the student should be allowed the use of a compound microscope; but when this is not practicable, microscopic demonstrations by the instructor are indispensable. The laboratory work of the students may be supplemented by such explanatory and text-book work as may be deemed necessary; but this must be understood to supplement and not to replace the laboratory work.

Notes and drawings should be neatly made in blank books of moderate size. The paper for the drawings should be white, unruled, hard, smooth, but not glazed. A hard pencil should be used in drawing, and accuracy and neatness are both to be emphasized. The descriptive notes should not be written upon the same sheets as the drawings, and should be clear and concise, including only what the student has himself seen. Notes taken from lectures or reading should be kept entirely apart from the student's own observations.

No credit will be given for an herbarium. The time necessary to prepare an herbarium may be better devoted to a study of the living plants. (1 unit)

11. Zoology.—The candidate should possess a knowledge of the structure and relationships of a series of animals, gained primarily through the study of living forms and the dissection of specimens in the laboratory. At least four hours per week for one school year should be spent in actual laboratory work, which should include a study of the following forms, or their equivalent: amœba, paramœcium, hydra, starfish, sea-urchin, earthworm, crayfish, grasshopper, clam, slug, squid, dogfish, pigeon, rabbit. Laboratory note-books, certified by the instructor, should be submitted as evidence of the nature of the work, and should contain a full series of drawings and notes based on original dissections made by the student.

The practical work indicated above should be supplemented by such lectures or reading as will furnish a comprehensive knowledge of the groups studied. As a general reference book Parker & Haswell's Text-book of Zoology (Macmillan & Co., 1897) is recommended. (1 unit)

12. Biology.—A course of study and laboratory work extending through one school year, the time divided equally between two of the following subjects: Physiology, Botany, Zoology. The character of the work is indicated under the respective statements of subjects 9, 10, and 11. (1 unit)

13. Hygiene.—The requirements in Hygiene are based on adequate instruction in personal hygiene, the hygiene of occupation, and the relation of the citizen to the State in matters of sanitation and public health. The course should give the student a basis for intelligently meeting his individual problems of health in any environment, rational habits of regular exercise, practical knowledge of general hygiene and sanitation, and familiarity with the real dangers of transmissible diseases and the methods of controlling them.

Six laboratory periods per week of physical training and experimental work on the hygiene of the individual and the home, and two recitations per week on Public Health throughout the year, constitute the minimum requirements in this subject. A list of approved reference books will be furnished by the Department of Hygiene upon application.

The following distribution of the work over several years of the high school course is suggested:

First Year.—(*a*) One physical training period three times per week; (*b*) one demonstration or field trip per week in the systematic study of personal hygiene.

Second Year.—(*a*) One physical training period three times per

week; (*b*) one inspection trip per week in a prescribed study of the hygienic conditions of the various occupations.

THIRD YEAR.—(*a*) Gymnasium work and athletics optional; (*b*) two recitations per week on the principles of public health: this should consist of text-book work and carefully planned laboratory and field demonstrations. The class as a whole should construct a sanitary map of the community. (1 unit)

14-17. History.—Candidates for credit in entrance History must submit evidence of considerable work done in addition to the text-book preparation. For the sake of the training involved, as well as for the information acquired and the stimulating of interest, the following exercises are recommended: Supplementary reading, including the use of original material where possible, notes and digests of reading; abstracts or analyses of specified chapters, both of the text-book and supplementary reading; outlines of subjects, gathering material from all available sources; map drawing from printed data or comparison of existing maps, showing movements of exploration, migration or conquest, territorial changes, or social phenomena.

Such work should be regarded as a means rather than the end of historical study, and in every instance should be adapted in character and amount to the stage of advancement of the class and of the individual pupil. As the pupil progresses in his study, more advanced work may well be required in the form of historical composition, and of note-taking in the class from talks by the teacher or reports of fellow pupils.

14. Ancient History.—Text-books: *The Oriental Nations*—Myers, General History, pp. 1-86; or West, Ancient History, pp. 1-75; or an equivalent. *Greece*—Botsford, History of Greece; or Myers, History of Greece; or Morey, Outlines of Greek History; or Oman, History of Greece; or West, Ancient History; or the equivalent. *Rome*—Botsford, History of Rome; or Myers, Rome; or West, Ancient History; or Morey, Outlines of Roman History; or an equivalent.

For supplementary reading and reference: Botsford, Story of Rome; Munroe, Source Book of Roman History; "Epochs of Ancient History" Series; Wolfson, Essentials in Ancient History; Cox, General History of Greece (Student Series); Pelham, Outlines of Roman History; Abbott, Roman Political Institutions; Shuckburgh, History of Rome; Ginn & Co.'s Classical Atlas, or Kiepert, Classical Atlas; Tozer's Primer of Classical Geography. See, also, Historical Sources in Schools, and A History Syllabus for Secondary Schools. (1 unit)

15. Mediaeval and Modern History.—Text-books: Myers, Mediæval and Modern History; or Robinson, History of Western Europe; or, Harding, Essentials in Mediæval and Modern History; or the equivalent.

For supplementary reading and reference: Robinson, Readings in European History; West, Modern History; Munro, History of the Middle Ages; Adams, Civilization During the Middle Ages; Bemont and Monod, Mediæval Europe; Munroe and Sellery, Mediæval Civilization; Fyffe, History of Modern Europe (Popular Edition); Seignobos, Political History of Europe since 1814; the "Epochs" Series; University of Pennsylvania, Translations and Reprints; Fling, Studies in European History; Putzger, Historischer-Schul-Atlas. See, also, Historical Sources in Schools. (1 unit)

16. History of England.—Text-books: Andrews, History of England; or Coman and Kendall, History of England; or Cheyney, A Short History of England; or Gardiner, Student's History of England; or Ransome, Advanced History of England; or Larned, History of England; or Oman, History of England; or Walker, Essentials in English History; or Wrong, History of the British Nation; or Terry, History of England; or an equivalent.

For supplementary reading and reference: Bright, History of England; "Epochs" Series; Green, Short History of the English People; Traill, Social England; Larned, History for Ready Reference; Porritt, The Englishman at Home; Adams and Stephens, Select Documents of English Constitutional History; Colby, Sources of English History; English History Illustrated from Original Sources; Kendall, Source Book of English History; Translations and Reprints; and Gardiner, School Atlas of English History. Desirable references are to be found in Andrews, Cheyney, Coman and Kendall, Larned, and Wrong. See, also, Historical Sources in Schools; A History Syllabus for Secondary Schools; and Reference Books recommended by the University of Wisconsin. (1 unit)

17. American History.—Text-books: McLaughlin, History of the American Nation; or Channing, Students' History of the United States; and Ashley, American Government; or Hinsdale, American Government; or Clark, Outlines of Civics, and Bryce, American Commonwealth (abridged edition); or equivalents.

For supplementary reading and reference: "Epochs of American History" Series; the "American History" Series; Hart, American History Told by Contemporaries; MacDonald, Select Charters, Select

Documents, and Select Statutes; and McCoun, Historical Geography of the United States. See, also, Historical Sources in Schools.

(1 unit)

18-19. Spanish and French.—The requirements in Spanish and French are the equivalent of those recommended by the Committee on College Entrance Requirements of the National Educational Association.

The elementary study of the languages, covering two years of daily recitations, should lay stress on the following points:

1. An accurate knowledge of the forms of the languages, including the inflections, conjugations, and principal parts of verbs. Particular attention should be devoted to this part of the subject; constant drill in the verbal inflections, both written and oral, and dictation exercises of various kinds, are recommended. 2. The elements of syntax, such as the uses of the article, the personal pronouns, the subjunctive, the partitive constructions, and the agreement of the participles. 3. The ability to turn easy English prose into French or Spanish. 4. The ability to translate ordinary French or Spanish into idiomatic English. 5. The ability to pronounce French and Spanish correctly. It is believed that a fairly good pronunciation can be obtained in the fitting schools, if the necessary time is devoted to the subject. Pronunciation should be studied both theoretically and practically, and the characteristics of vowel qualities, of stress, pitch, and intonation should be pointed out.

The Intermediate requirements are intended to represent a third year of daily recitations. The specific demands are:

1. A thorough knowledge of modern French and Spanish syntax. 2. The ability to turn ordinary modern French and Spanish at sight into idiomatic English. 3. The ability to translate connected English prose of moderate difficulty into French or Spanish. 4. The ability to write French or Spanish from dictation.

The Advanced requirements in French will occupy the fourth year of daily recitations. At the end of this course the student should be able:

(1) To read at sight any standard author not earlier than the seventeenth century; (2) to write in French a short essay on some simple subject connected with the works read; (3) to translate correctly a passage of modern English prose; (4) to carry on a simple conversation in French; (5) to follow a lecture in French.

For all grades the examination will include a test of pronunciation and the writing of French or Spanish from dictation.

The reading in the Elementary course should cover from four hundred to six hundred duodecimo pages; for the Intermediate requirements a similar amount should be read of prose and verse, a portion to be in the dramatic form; and for the Advanced requirements the same quantity of prose and verse should be selected from standard authors not earlier than the seventeenth century, and these should be read with reference to their literary value.

The practice of writing compositions consisting in reproductions or paraphrases of the matter read should be begun in the Intermediate course and followed by short themes along similar lines in the Advanced course.

No definite text-books are prescribed, but the books named below will be found adequate for the mastery of these requirements.

18a. Elementary Spanish.—Hills and Ford's Spanish Grammar (Heath & Co.), or Garner's Spanish Grammar (American Book Co.); Ramsey's Elementary Spanish Reader (Holt & Co.); Matzke's First Spanish Readings (Heath & Co.); Tamayo y Baus, Un Drama Nuevo (Jenkins, New York); Valdés, Jose (Heath & Co.); Alarcón El Capitán Veneno (Heath & Co.). (2 units)

18b. Intermediate Spanish.—Umphrey, Spanish Prose Composition (American Book Co.) or Ramsey's Elementary Spanish Text-book (Holt & Co.); Ramos y Vital, Zaragueta (Silver, Burdett & Co.); Caballero, La Familia de Alvareda (Holt & Co.); Alarcón, El Niño de la Bola (American Book Co.); Moratín, El Sí de las Niñas (Ginn & Co.); Echegaray, El Gran Galeoto (Koehler, Boston). (1 unit)

19a. Elementary French.—Fraser & Squair's French Grammar and Reader, Part I (Heath & Co.), or Whitney's Practical French Grammar, Part I (Holt & Co.), or Grandgent's Essentials of French Grammar (Heath & Co.), or Chardenal's Complete French Course (Allyn & Bacon), or François' Beginners' French (American Book Co.); Super's French Reader (Heath & Co.), or Aldrich & Foster's French Reader (Ginn & Co.), or François and Giroud's Simple French (Holt & Co.); Dumas, La Tulipe Noire; Halévy, L'Abbé Constantin; Labiche, Le Voyage de Monsieur Perrichon; Mérimée, Colomba. For the study of pronunciation, Matzke's Primer of French Pronunciation (Holt & Co.) is recommended. (2 units)

19b. Intermediate French.—Fraser & Squair's French Grammar and Reader, Part II (Heath & Co.), or Whitney's Practical French Grammar, Part II (Holt & Co.), or Edgren's Compendious French Grammar (Heath & Co.), or François' Advanced French Composition

(American Book Co.); George Sand, La Petite Fadette; Balzac, Eugénie Grandet; Victor Hugo, Hernani (Heath & Co.); Fontaines, Historiettes Modernes (Heath & Co). (1 unit)

19c. Advanced French.—Selected plays of Corneille, Racine, or Molière; La Fontaine, Fables. Selections from the writings of Rousseau or Voltaire; Lamartine, Grogiella; Hugo, Ruy Blas; Rostand, Cyrano de Bergerac; Renan, Souvenirs d'enfance et de jeunesse; selected works of Balzac, Maupassant, Daudet, and Anatole France; Modern French Lyrics. (1 unit)

20. German.—The requirements in German are essentially those recommended to the National Educational Association by its Committee on College Entrance Requirements, but more emphasis is put upon the acquisition of power as distinguished from learning.

20a. Elementary German.—The ability to read understandingly easy German prose and verse at sight; an accurate knowledge of the most important elements of grammar, embracing especially inflections, word-order, and the essentials of syntax, as also the ability to appreciate the force of prefixes and suffixes; the ability to express in correct German simple ideas concerning familiar things; the ability to make oral use of the German learned and to recognize German words and simple sentences when spoken. Careful attention should be given to pronunciation and accentuation, in order to insure the power to read German fluently and intelligently.

This preparation is represented, approximately, *in reading,* by material of the character of Thomas and Hervey's Reader, and the careful study of one or more modern dramas (about two hundred duodecimo pages of easy German), supplemented by the reading of German lyrics and ballads, a number of which should be memorized; *in composition,* by daily practice in reproducing in one form or another the German read and in writing in German. (2 units)

20b. Intermediate German.—The ability to read intelligently ordinary German prose and verse at sight; some knowledge of word-formation and derivation; practical familiarity with the principles of syntax, with special reference to the uses of the tenses and cases, the modal auxiliaries, and the moods; increased ability to write and speak German.

It is believed that this preparation can be acquired by continued practice such as is suggested above, in connection with the careful reading of five hundred duodecimo pages of contemporary and classical prose and verse, in addition to the reading required for Elementary German. It is recommended that about one-half of this reading be

selected from the works of living or recent writers, such as Otto Ernst, Storm, Keller, Freytag, etc.; and the other half from such classics as Lessing's Minna von Barnhelm, Schiller's Wilhelm Tell, and Goethe's Wahrheit und Dichtung. Particular attention should be paid to the literary value of the works read. It is also desirable that candidates should acquire the ability to understand and take part in a recitation conducted in German. (1 unit)

20c. Advanced German.—A fourth unit in German may be given to candidates who fulfil, in addition to the preparation required in Elementary and Intermediate German, the following requirements: A firmer hold on the important elements of German Grammar; a thorough knowledge of at least two of the following classics: Goethe's Hermann und Dorothea or his Iphigenia, Lessing's Nathan der Weise, and Schiller's Wallenstein, as well as of two or more recent dramas, all of which should be studied as much as possible with an eye to the appreciation of their literary value; some familiarity with the technical language of literature and science; the ability to compose in German with ease and to follow lectures delivered in German. (1 unit)

21. Latin.—

Latin Reading.—The reading required in elementary and advanced Latin, without regard to the prescription of particular authors and works, is not less *in amount* than Caesar, Gallic War, I-IV; Cicero, the orations against Catiline, for the Manilian Law, and for Archias; Virgil, Aeneid, I-VI.

An equivalent amount of reading from authors other than these specified above may be substituted. The following are suggested: Caesar, Civil War; Eutropius; Nepos; Terence, Phormio; Cicero, Letters; Sallust; Virgil, Bucolics and Georgics; Ovid, Metamorphoses.

Translation at Sight.—Candidates will be examined in translation at sight of both prose and verse. The vocabulary, constructions, and range of ideas of the passages set will be suited to the preparation secured by the reading indicated above.

Prescribed Reading.—Candidates will be examined also upon the following prescribed reading: Cicero, orations for the Manilian Law and for Archias, and Virgil, Aeneid, I, II, and either IV or VI at the option of the candidate, with questions on subject-matter, literary and historical allusions, and prosody. Every paper in which passages from the prescribed reading are set for translation will contain also one or more passages for translation at sight; and to obtain credit candidates must deal satisfactorily with both parts of the paper.

Grammar and Composition.—The examinations in grammar and composition will demand thorough knowledge of all regular inflections, all common irregular forms, and the ordinary syntax and vocabulary of the prose authors read in school, with ability to use this knowledge in writing simple Latin prose. The words, constructions, and range of ideas called for in the examinations in composition will be such as are common in the reading of the year, or years, covered by the particular examination.

Suggestions Concerning Preparation.—Exercises in translation at sight should begin in school with the first lessons in which Latin sentences of any length occur, and should continue throughout the course with sufficient frequency to insure correct methods of work on the part of the student. From the outset particular attention should be given to developing the ability to take in the meaning of each word—and so, gradually, of the whole sentence—as it stands; the sentence should be read and understood in the order of the original, with full appreciation of the force of each word as it comes, so far as this can be known or inferred from that which has preceded and from the form and position of the word itself. The habit of reading in this way should be encouraged and cultivated as the best preparation for all the translating that the student has to do. No translation, however, should be a mechanical metaphrase. Nor should it be a mere loose paraphrase. The full meaning of the passage to be translated, gathered in the way described above, should finally be expressed in clear and natural English.

A written examination cannot test the ear or tongue, but proper instruction in any language will necessarily include the training of both. The school work in Latin should include much reading aloud, writing from dictation, and translation from the teacher's reading. Learning suitable passages by heart is also very useful, and should be practiced.

The work in composition should give the student a better understanding of the Latin he is reading at the time, if it is prose, and greater facility in reading. It is desirable, however, that there should be systematic and regular work in composition during the time in which poetry is read as well; for this work the prose authors already studied should be used as models.

(Four units, distributed as follows: Elementary and Caesar, 2 units; Cicero, ½ unit; Virgil, ½ unit; third-year Composition, ½ unit; fourth-year Composition, ½ unit.)

22. **Greek.**—

22a. Elementary Greek.—Grammar, the inflections, the formation of words, and the essential points of syntax; Xenophon's Anabasis, Books I-IV, or an equivalent; prose composition (Pearson's text-book is recommended); translation at sight of easy prose. It is expected of every student that he be able to read Greek aloud without stumbling. (2 units)

22b. Advanced Greek.—Homer, Iliad, Books I-III, or an equivalent; advanced prose composition. The candidate must show a thorough acquaintance with the forms and syntax of Homer, and must be able to scan any given passage exactly and to read it rhythmically. In the writing of Greek the candidate should have a year's training beyond that required in Elementary Greek. (1 unit)

23. **Freehand Drawing.**—The requirements assume instruction for 240 hours of 60 minutes each, arranged to extend through a period of a year. Approximately two-thirds of this time should be given to representation and pictorial composition and one-third to decorative and constructive design.

A. Representation.—Object drawing, boxes, books, bowls, vegetables, machine parts, drawn in various positions with attention to perspective facts in line and also to light and shade.

Plant forms, seed pods, shells, insects, animals, and simple landscape, drawn in line, in light and shade, and in color.

The style of drawing should be direct, facile and effective, adapted to the thing drawn, with refinement in its proper place and vigor in its proper place. The candidate should be equally familiar with the use of pencil and charcoal or brush.

Composition, exercises in arrangement and adaptation of pictorial subjects into good composition, using both rhythmic line arrangement and harmonious color.

B. Design.—(1) Exercises in space filling, borders and all-over patterns with use of geometric and organic forms. (2) Principles of constructive and decorative design applied to simple objects, as: in printing, a title-page or program; in textiles, a stencil or embroidery design for a curtain or table-scarf; in wood, working drawings for a chair, table, clock-case, book-rack, etc.; in metal, cabinet hardware and lighting fixtures, etc. Talks supplemented by photographs of the best paintings and architecture, and talks upon taste in home furnishing and appointments, with visits to worthy examples, should supplement the course, with a view to developing an enlightened taste in art.

Candidates for credit must show drawings and note-books. The examination will consist of two parts, one in representation, one in the execution of a problem in applied design. The candidate is expected to provide himself with the materials—paper, pencil, charcoal, brushes, and color—which he will use is the examination.

24. Mechanical Drawing.—Full unit credit equivalent to about two hundred and fifty hours of work under instruction.

The candidate is expected to have acquired neatness and accuracy in the use of drawing instruments. His course should have included practice in line work, lettering, machine or architectural working drawings, and tracing; recognition, commensurate with the length of course and the degree of proficiency attained in the use of instruments, will be given, however, to those courses consisting of line work, lettering, and the construction of geometric figures. He should present for inspection as much of his work as is possible, duly certified by his teachers. As an examination the candidate may be called upon to make a simple drawing of some specified object or geometrical figures; he should provide his own material for the examination, as follows: T-square, triangle, instruments, pencil, eraser, scale, thumbtacks, drawing ink, and sheet of drawing paper not smaller than 12x18 inches.

(½ or 1 unit)

25-28. Shopwork.—Two things will be expected of candidates for entrance credit in these subjects: first, manual dexterity, as evidenced by neatness, accuracy, and dispatch in the execution of a given piece of work; second, a knowledge of the materials and tools used, and a thorough understanding of the principles involved in the operations.

Candidates who have been trained in manual training schools or in commercial shops should present letters from their teachers or employers stating clearly and in some detail the time they have been employed, the kind of work they have done, and its quality. The examination may be oral, written, the actual execution of a set piece of work, or all combined. In each subject the ability to read and follow a working drawing is expected.

25. Woodworking.—The ability to recognize the common varieties of wood and some knowledge of their physical properties, such as ease of working, strength, toughness, hardness, etc., is expected. Candidates must be familiar with the uses of the principal hand tools of carpentry and with their care. They should be able to make the ordinary kinds

of joints and splices. They should be familiar with the operation of the lathe, jig-, band-, and circular-saws, and planing machines.

Equivalent to about two hundred hours of work under instruction in a manual training school, or a year in a commercial shop. (½ unit)

26. Forge Work.—This demands an elementary knowledge of the properties of wrought iron and steel, and of the proper heats at which to work them. The management of forge and fire and the nature and uses of all the ordinary blacksmithing tools should be known. The candidate must be able to execute all of the common forging processes, including the various forms of welds in iron and steel; he is also expected to understand hardening, tempering, and annealing.

Equivalent to about two hundred hours of work under instruction in a manual training school, or a year in a commercial shop. (½ unit)

27. Foundry Work.—The candidate should have a knowledge of the tools and processes used in the ordinary forms of green sand moulding and core work. He should be familiar with the cupola and know how to charge and operate it. He must have a knowledge of the properties of cast iron, and should have had experience in pouring cast iron as well as in moulding.

Equivalent to about two hundred hours under instruction in a manual training school, or a year in a commercial foundry. (½ unit)

28. Machine Shop.—A knowledge of the tools and processes used in the working of iron, steel, and brass is demanded of the candidate. He should be able to execute all forms of vice-work, such as chipping, filing, scraping, fitting, and finishing. He must be familiar, through experience in operation, with the simpler forms of machine tools, such as the lathe, drilling machine, planer, shaper, and milling machine.

For one-half unit credit: About two hundred hours under instruction, or one year in a commercial shop.

For one unit credit: About four hundred hours under instruction, or two years in a commercial shop. (½ to 1 unit)

II. SPECIAL STUDENTS

Persons under twenty-one years of age will not be received as special students.

The privileges extended to special students are not intended for those who come directly from the schools, with insufficient preparation for regular standing, but for those who are qualified by age, character, practical experience, and habits of study to profit by university courses.

(On account of the limitation upon the number of women students, women are not admitted as special students.)

Persons under twenty-five years of age, not graduates of some approved high school or equivalent preparatory school, will be admitted only upon passing entrance examinations in subjects aggregating at least five units. The candidate may usually select the subjects in which examinations shall be taken, but engineering students must include elementary algebra and plane geometry.

Special students are subject to the same University regulations as regular undergraduates, and they may become candidates for graduation upon fulfilling all University requirements (see p. 67).

Blank applications for admission as special students may be obtained from the Registrar.

III. ADVANCED STANDING

Students from other institutions of recognized collegiate rank, who present satisfactory credentials, may be admitted to such standing and upon such terms as the Faculty may deem equitable. Students from institutions of equivalent rank, who maintain a satisfactory record after admission, may expect to receive the same standing as at the former institution, except that no such student can be given more than three years' advanced credit (ninety unit-hours toward graduation), and that differences in standard of entrance preparation will be taken account of. Every candidate must present a full certified transcript of his college record, including entrance credit, and a letter of honorable dismissal. Women with less than two years of college standing must make formal application in advance on blanks to be furnished by the Registrar (see pp. 62-63).

Recommended graduates of approved State Normal Schools where the normal training has been preceded by a full four years' high school course, or where high school and normal school course together cover six years' work, may be granted an advanced credit of not more than thirty units.

Blank applications for admission to advanced standing may be obtained from the Registrar.

All applications for advanced standing on the basis of work done before entering the University must be filed within two years after matriculation; and such applications will not be received at a later date.

IV. GRADUATE STANDING

Graduates of institutions of recognized collegiate rank may be admitted to graduate standing in the University upon presentation of diplomas or equivalent credentials. Admission to technical graduate standing does not imply admission to candidacy for an advanced degree (for the conditions of such candidacy see p. 75). If graduates of other universities desire to become candidates for the baccalaureate degree, the question of units required for graduation may be waived, upon approval of the Committee on Admission and Advanced Standing, and the degree conferred on the satisfactory completion of not less than thirty units of University work and the fulfillment of all major and minor requirements. Graduate students not candidates for any degree, may be permitted, upon the approval of the major department, to undertake such work as their previous training seems to warrant.

Special Regulations Governing Admission of Women

The Founding Grant of the University, as amended May 31, 1899, directs "that the number of women attending the University as students shall at no time ever exceed five hundred." In conforming to this provision the following plan of admission has been adopted:

Graduates of other universities and candidates who have completed at least two full years in a college or university of recognized standing, will be admitted without previous application, provided they present themselves for matriculation upon the regular registration days. Women once admitted to the University will be allowed to continue without further application, so long as scholarship and conduct are satisfactory, and provided they present themselves for registration on the regularly appointed days. Places will not be held for women after the regular registration days, except by permission of the Committee on Registration granted in advance.

For the remaining number of women students permitted by the Founding Grant (for August, 1911, approximately 100) the plan of admission is as follows:

Applications may be made at any time. They must state the proposed time of entrance and the credentials which the candidate expects to offer. To insure consideration, applications made more than ten months before the proposed date of matriculation must be renewed

(by written notice or new application) some time during the ten months immediately preceding the proposed date of matriculation. Blanks for application may be obtained of the Registrar.

Numbered lists will be begun July 10th (for the August-September matriculation), and October 10th (for the January matriculation). All candidates whose credentials are complete and in the hands of the Registrar on the dates specified will be given numbered admission cards in the order of original application. After the first lists are made up, additional numbered cards will be issued in the order in which complete credentials are received, the order of original application applying where the complete credentials of more than one candidate are received on the same date.

Complete credentials comprise: *For first-year standing,* (1) formal application, (2) fifteen accepted entrance units; *for advanced standing,* (1) formal application, (2) full certified transcript of college record, including entrance credits, (3) letter of honorable dismissal. (Formal application is waived in the case of candidates with full junior standing.)

On registration day candidates will be preferred in their serial order. After registration day the serial order of candidates actually present will be observed.

Candidates receiving numbered cards for a given date, but not matriculating at that time, may be transferred to any succeeding list, in their serial order, by giving due notice to the Registrar (before October 10th, or July 10th, as the case may be).

UNIVERSITY RESIDENCE

Registration

On the appointed Registration Days, in August and January, each student must obtain a certificate of registration *in person,* at the Registrar's office.

Matriculated students may register after the appointed Registration Days and during registration week, upon payment of a special fee of two dollars; during the week following the fee for late registration will be four dollars; after that the fee will be increased one dollar for each week's delay. Registration of undergraduates and specials will not be permitted later than one month after the beginning of instruction.

Study Card

At the Registrar's office the student receives a card for selection of studies for the semester. This card, properly filled out, and approved by the major department, must be filed with the Registrar on Registration Day; but late study cards will be accepted upon payment of a special fee of two dollars. Students registering late are admitted to particular classes only by permission of the instructors concerned. All work for which University credit is desired must be duly registered.

Enrollment in Classes

A student desiring to enter any class must present his certificate of registration to the instructor for enrollment at the beginning of each semester. Whether the student is qualified for enrollment in a particular class is a question to be decided by the instructor in charge. In general, the prerequisites for taking any given course are noted under "Courses of Instruction."

Change of Studies

A student desiring to drop a subject once taken up, or to take up a new subject after the study card has been filed, must present to the Committee on Registration a petition for such change, approved by the major department and by the instructors whose subjects are to be taken or dropped. In general, petitions so approved, if they do not

give the student too many unit-hours, or too few unit-hours, and if presented within three weeks after the beginning of the semester, are granted without question. If presented at a later time in the semester they will be granted only for extraordinary reasons, and, where the taking up of new subjects is involved, only on payment of a special fee of two dollars for each course; if otherwise acceptable but presented after the close of the semester, they will be granted only on payment of a special fee of four dollars for each course. In the case of petitions to drop subjects during the last six weeks of the semester, action will be deferred until the close of the semester.

Change of Major Subject

Petitions to change the major subject will be granted when approved by the departments in charge of both the old and the new subjects, the student being held to all the requirements of the new major subject. (First-year students may change their major subject at the end of the first or second semester without petition.) In general, the major subject may be changed at the end of the first year, and in some cases later, without appreciable loss of time to the student.

Amount of Work

Fifteen hours per week of recitations or lectures or an equivalent in laboratory work, constitutes an average semester's work. In general, students may register for as few as *thirteen* or as many as *eighteen* unit-hours; but in the case of students doing outside work for self-support or otherwise, and where considerations of health are involved, special restrictions will be made upon recommendation of the professor of hygiene; and where conditions or failures have been incurred in the preceding semester, not more than *fifteen* units may be registered unless by special permission of the Committee on Registration granted in advance. Permission to register for less than *thirteen* units may also be granted for special reasons; but registration for less than *ten* units will not ordinarily be accepted. Not more than eighteen units may be credited toward graduation for any semester's work, unless, in exceptional cases, permission to register for additional units is granted in advance. Graduate students are not held to any special number of unit-hours, but registration will not ordinarily be permitted unless such students are prepared to devote at least half of their working time to University study. Petitions for irregular registration should be presented at the beginning of the semester.

Every unit for which credit is given is understood to represent approximately, for the average student, three hours of actual work per week, through one semester. Thus, in lecture or recitation work, for one unit of credit one hour per week may be allotted to the lecture or recitation and two hours for preparation or subsequent reading and study on the part of the student; but if a less amount of time is allotted for preparation or subsequent reading or study, there shall be a proportionate decrease in the amount of credit. Where the time is wholly occupied with drawing, field, or laboratory work, or in the class-room work of conversation classes, three full hours per week through one semester are expected of the student for each unit of credit; but where such work is supplemented by systematic outside reading or experiment under the direction of the instructor, such a reduction may be made in the actual drawing, field, laboratory, or class-room time as seems just to the department concerned.

Conditions and Failures

A student conditioned in any subject may arrange with the instructor concerned for such supplementary examinations or study as will make good the deficiency; but such deficiency must be removed within one year after the condition is incurred, otherwise the condition will be considered a failure. Work reported as incomplete may be made up during the first or second semester's registration after the incomplete is incurred; but if not made up until the second semester, the incomplete work shall be duly entered on the student's study card and shall count as part of the permitted registration for that semester to the extent of the actual unit-hours required for making up such incomplete work as estimated by the instructors concerned. A student failing in any subject cannot receive credit for the portion in which the failure is incurred until the subject has been re-registered and taken over again in class. A condition or failure or withdrawal from class without permission of the Committee on Registration, limits the student to *fifteen* units the semester following.

Mid-semester reports on scholarship are obtained from all instructors, and students reported as doing unsatisfactory work are notified of their deficiencies. A student whose work is unsatisfactory may be placed on probation at any time. At the middle and at the end of the semester each department shall be notified of all serious deficiencies in scholarship affecting students whose major work is in that department.

A student who receives passing grades in less than half the work for which he is registered during his first semester, or in less than two-thirds during any subsequent semester, shall be deemed to have failed in his studies. After a first failure, unless unusually serious, a student may, with the approval of the major department, again register in the University, but shall be placed on probation for one semester. A second failure shall result in withdrawal from the University. Work marked "incomplete" will be considered of passing grade only when reported as satisfactory in quality and not seriously deficient in quantity.

A student whose delinquency is unusually serious, or is the result of persistent neglect, may be required to withdraw from the University at any time.

Leave of absence will not generally be granted to a student on probation, nor to any student whose work during the current semester is unsatisfactory, unless applied for at least six weeks before the end of the semester.

A student on probation may not take part in any intercollegiate contest, nor represent the University in any way, whether individually or in connection with any athletic, literary, musical, dramatic, or other organization.

From Special to Regular Standing

Special students may be entered in regular standing and become candidates for graduation, on passing examinations in the required number of entrance subjects, provided such examinations are passed not later than two years after matriculation. In place of entrance examinations, university work to the amount of five units for each entrance deficiency may be offered in university subjects which are also included in the entrance group.

A special student who has completed one hundred and fifty units of university work, including all major requirements, and whose general university record is deemed proof of superior scholarship, may become a candidate for graduation on approval of the Committee on Admission and Advanced Standing. Petitions to this end will not be considered by the Committee until after the student has completed one hundred and twenty units of university work.

University Credit for Extra Entrance Subjects

Credit toward graduation may be given for entrance subjects in excess of the number required for admission, provided such extra

entrance subjects are also university subjects, and are successfully continued in the University within two years after matriculation, and provided the student's general University record is deemed proof of superior scholarship. In general, three units of advanced credit will be granted for each extra entrance unit representing elementary work in a given subject, and five units of advanced credit for each extra entrance unit representing advanced work. Application for such university credit must be made within two years after matriculation. After matriculation additional entrance units may be offered only for the purpose of making up entrance deficiencies.

University Credit for Special Courses

University credit is given only for work done in residence at the University. Work prescribed by any professor of such a nature that it cannot be done at the University or can be more advantageously done elsewhere may be regarded as work done in residence. But such special work must be duly registered in advance; or, if not registered in advance but approved later, may be credited only upon payment of a special fee of two dollars for each course.

Matriculated students on leave of absence may take work in other universities, usually without any restrictions other than those imposed by the university in question. But work undertaken in any Summer Session may be subject to special regulations, and must be approved by the major department and by the department in which the work is to be taken. The last semester's work of every candidate for a degree must be taken in this University, except that, in special cases, students who have obtained at least ninety units in resident work at the University and who have completed all major department requirements may be exempted from this regulation.

Advanced Standing

Advanced standing for work done before matriculation will generally be given only when certified as having been completed in some institution of recognized collegiate rank, except as provided above for extra entrance units, or, in particular cases, to recommended graduates of approved State Normal Schools (see p. 61). But in special cases permission may be given by the Faculty to receive credit on examination for work equivalent to regular University courses. Application for such examinations, with satisfactory evidence of the work accomplished, must be presented to the Committee on Advanced Standing. Applica-

tions for advanced standing on the basis of work done before entering the University must be made within two years after matriculation.

Leave of Absence

A student desiring to leave the University for a brief time should apply to the Committee on Registration. If leave of absence is desired on account of sickness, the petition must be indorsed by the professor of hygiene. A leave of absence is merely a justification of the absence and not a relief from the work that has been missed. A leave of absence is usually necessary only in case of interrupted work; a student in good standing absent one or more semesters may re-enter at the beginning of any semester without formal petition.

Honorable Dismissal

An honorable dismissal means that the student is permitted voluntarily to withdraw from the University and is commended to the favorable consideration of any institution he may wish to enter. An honorable dismissal may be granted upon written application to any student not under discipline for misconduct.

Conduct of Students

In the government of the University the largest liberty consistent with good work and good order is allowed. Students are expected to show both within and without the University such respect for order, morality, personal honor, and the rights of others as is demanded of good citizens. Failure to do this will be sufficient cause for removal from the University.

In 1908 the Board of Trustees of the University provided that in all future rentals or leases of houses as fraternity chapter houses it shall be expressly stipulated that no intoxicating liquors of whatever kind shall ever be sold or used on the premises. The Trustees also by formal resolution requested the Academic Council to prohibit the use of liquor in fraternity chapter houses, student club houses, and other student lodgings.

This action of the Board of Trustees is in harmony with the instructions given by the Academic Council to its Committee on Student Affairs, and defines the policy of the University. Prohibition of the use of liquor extends to all student lodgings whether on the campus or elsewhere. The University assumes that the act of registering as a student implies full acceptance of this policy.

Tuition and Incidental Fees

The Constitution of the State of California, as amended November 6, 1900, authorizes the Legislature, under certain conditions, to exempt the property of the University from taxation, provided residents of California are charged no fees for tuition unless such fees shall be authorized by the Legislature. An Act of the Legislature, approved February 14, 1901, "exempting from taxation a portion of the property held in trust for the benefit of the Leland Stanford Junior University," as amended in March, 1907, provides "that while this Act is in force no fees shall be charged residents of this State for tuition, except that such fees may be charged in professional and engineering courses, but no such fees shall be charged to any student who is registered in any such courses when this Act takes effect."

Tuition Fees are charged in Law, for professional law courses, as follows: for students registering for thirteen or more units in law in any semester, *twenty-five dollars* per semester; for students registering for less than thirteen units in law for any semester, *two dollars* per unit per semester.

The Tuition Fee in the Department of Medicine is *one hundred and fifty dollars* per year.

An Incidental Fee of *fifteen dollars* per semester is charged to all registered students with the following exceptions: (1) Those registered in the professional courses of Law and Medicine, paying tuition fees in those departments amounting to fifteen dollars or more per semester; (2) graduate students accepted as candidates for an advanced degree.

Students in laboratory courses pay for the materials which they use, and in various courses syllabus and other fees may be charged. Laboratory and syllabus fees are different for the different courses, ranging from *fifty cents* to *twenty-five dollars* per semester.

Laboratory fees are ordinarily returnable as follows when duly claimed in writing within two months after the date of withdrawal from the University: thus, the whole amount will be refunded when the student withdraws within one week of the beginning of a semester, and one-half the amount if the student withdraws before the middle of a semester; but no fees will be refunded on account of withdrawals after the middle of a semester, nor unless claimed in writing within two months after the date of withdrawal. (This regulation is not applicable to the Department of Chemistry.)

A diploma fee of *five dollars*, payable before Commencement in May, is charged all persons receiving degrees from the University.

Cost of Living

The cost of living in Roble Hall, including board, room, light, heat, and attendance, averages about twenty-seven dollars per month. Students furnish their own linen, blankets, and towels. Requests for reservation of rooms should be made to the Matron of Roble Hall.

Rooms in Encina Hall, furnished similarly to those in Roble Hall, but without board, cost from $6.00 to $6.50 per month, with two in a room. There are a few single rooms at $8.00 per month. Students occupying a double room alone pay the full price of the room. Each double room is furnished with two single beds. Requests for reservation of rooms should be made to the Clerk of Encina Hall.

Students may live outside the Halls only in places approved by the University.

In Palo Alto and College Terrace, at an average distance of a mile and a quarter from the University, rooms and board, in private houses, can be obtained, at from twenty-five to thirty dollars per month. A considerable number of students live in co-operative clubs, in which the cost of board and room is reduced as low as eighteen dollars per month; such rooms are lighted and heated, but usually unfurnished. Special commutation tickets are issued by the Southern Pacific Company, and students living in towns on the line of the railway, from San Francisco to San Jose, easily go to and from the University daily. There is also trolley connection with San Jose, Los Gatos, and intermediate towns.

On arriving at the University, new students may obtain information of rooms and board at the Information Bureau conducted by the Christian Associations. A complete list of approved rooms and boarding places is printed in August. Particular inquiries may be addressed to the secretaries of the Christian Associations.

The University Inn, located near the Quadrangle, has dining accommodations for about three hundred students.

Books and stationery will average from eighteen to twenty-five dollars per year.

The necessary expenses of the student, exclusive of clothing and railway fares, range from $300 to $450 per year.

Self-Support of Students

A considerable number of students manage, in one way or another, to earn the whole or a part of their expenses while attending the University. Such opportunities occur in the line of office and laboratory assistance, personal services of numerous kinds, the management of various student enterprises, agencies for laundries, etc.

The Student Employment Bureau (in charge of the Christian Associations) registers without charge all students who apply for employment, and supplies employers with student labor as demanded. In general, the demand and supply are nearly equal, but the attention of new students who intend to earn the whole or part of their living is called to the following results of past experience:

1. There is a constant *over-supply* of those wishing to do teaching and clerical work. None but those having superior qualifications and experience are likely to secure employment the first semester.

2. There is a considerable demand for efficient stenographers; also for men and especially women students who can do domestic labor of any kind; board and room rent may be earned by waiting on table, washing dishes, general housework, house cleaning, gardening, etc.

3. Students who can do any kind of domestic or manual labor *well*, and who have thoroughly good health, can earn their board by three hours' work per day, or board and room by four hours' work per day. Those who are bookbinders, printers, mechanics, or carpenters, will have a decided advantage in obtaining employment. *But no student should come to the University without resources sufficient for the expenses of one semester.*

4. The University curriculum is adapted to those who have control of their entire time for study. The student who must earn his living, therefore, should expect to take less than the usual amount of University work.

5. No student should come expecting to earn money, who can do nothing well; skill is absolutely essential, as competition is quite as severe in the college community as elsewhere.

6. Opportunities for earning money during the summer vacations can usually be counted on, the demand for canvassers being most constant.

Particular inquiries concerning opportunities for self-support should be addressed to the Secretaries of the Y. M. C. A. or Y. W. C. A. Upon arrival at the University new students should report for registration and information to the Information Bureau of the Associations.

University Health Control

The University exercises an advisory control over student health affairs through the Committee on Public Health.

Every student upon entering the University is required to report for a brief medical examination. General health, eyesight, hearing, and evidence of effective vaccination are the important factors in the examination. Any condition which may place a limitation on the amount or kind of work planned by the student is discussed with him or made the subject of a report to his major department or to the Committee on Registration.

Students intending to train for any of the athletic teams, or to register for gymnasium work, are required to pass a careful physical and medical examination at the beginning of each semester.

A careful inspection of all boarding and rooming houses in the community is carried out under the supervision of the Public Health Committee, and only those are permitted to register who arrange to live in houses which have been approved.

Regulations concerning Vaccination.— (1) Each student will be required to present, for purposes of record, a dated statement, signed by a physician in good standing, certifying to his or her last successful vaccination. Such certificates will be returned, upon request, after incorporation into the University records. Inspection of the scar by the University authorities may be required. (2) A history of previous vaccinations is requested, but need not be in the form of a signed certificate. (3) Revaccination will be required of all those not successfully vaccinated within seven years. (4) Unsuccessful vaccination must be followed by a second trial within two weeks. (5) Should the disease at any time appear at or in the vicinity of the University, vaccination must be performed immediately on all those directly exposed who have not been successfully vaccinated within one year. Should the disease become prevalent, vaccination of all members of the University community not successfully vaccinated within one year, must be performed.

Students' Guild

The Guild is a student organization which seeks to make provision for the care of all cases of serious illness among its members. This is now accomplished for non-contagious diseases, through an arrangement with the Peninsula Hospital of Palo Alto. For the care of contagious diseases, no adequate provision has yet been made. A

detention hospital is urgently needed and should be erected on the University campus. The Guild has not as yet succeeded in securing an available site, and for the present is compelled to limit its responsibility in contagious cases to a specified amount of financial aid.

All students are required to become members of the Guild by paying the fee, which for 1911-12 is two dollars each semester. A uniform hospital rate of one dollar per day is charged all members of the Guild, in addition to such special charges as may be incurred for extra service.

The officers of the Guild for 1910-11 are as follows: President, Edward Guilford Cary, '11; Vice-President, Florence Prior Metzner, '11; Secretary, Herbert Eustice White, '11; Treasurer, Frank Kenneth Pomeroy, '11; Wilbur Ray Chandler, '13; Professors Gilbert, Mitchell, and Stoltenberg.

GRADUATION

Candidates may present themselves for graduation in January, May, and September.

No degree will be conferred upon any person who has not spent at least one year in resident study at the University. No honorary degrees are given.

Bachelor of Arts

The degree of Bachelor of Arts (A. B.) is conferred upon candidates who have satisfactorily completed a total of one hundred and twenty units of University work and who have also satisfied the requirements in major and minor subjects.

Thirty units constitute a normal year's work (see p. 65), but the ordinary class divisions (freshman, sophomore, junior, senior) are not recognized by the University. The degree is conferred whenever the requirements are met, without regard to the time spent, except that at least thirty units (including the last fifteen) must be completed in this University.

Each student selects as a Major Subject the work of some one Department. The Major Department has the authority to prescribe not more than forty units in the Major Subject (exclusive of elementary courses in the Major Department which may be offered for entrance). The Major Department shall also recommend such other courses as it may consider desirable, and shall exercise an advisory supervision over the student's entire curriculum from semester to semester. Major Department supervision of the student's study lists shall be administered in the spirit of the major subject system, which is to provide the inexperienced student with necessary advice and direction while developing his power of initiative, and to accord to the mature student larger and larger responsibility in planning his own curriculum. It shall be considered a general principle of university policy, to be departed from only in exceptional cases, that at least sixty of the one hundred and twenty units required for the degree be taken outside of the Major Department.

In applied science the Major Department may prescribe so much of the entire one hundred and twenty units as it shall deem essential to the technical or professional requirements of the major subject.

A course in English Composition (English A) is prescribed for first-year undergraduates who do not satisfy the matriculation test.

Within these limitations the work in all departments is elective, and the student may freely choose any course which his previous studies have prepared him to undertake.

The recommendation of the Major Department is necessary to graduation.

(A student in regular undergraduate standing who does not intend to become a candidate for the A. B. degree, may choose, with the approval of the major department, any courses in the University which his previous training has prepared him to undertake.)

Candidacy for Advanced Degrees

Every applicant for an advanced degree must file at the Registrar's office not later than the beginning of the semester preceding that in which the degree is sought, a formal application including a statement of the proposed course of study. This application must be approved by the department faculty concerned, and upon acceptance by the Committee on Graduation the applicant is admitted to candidacy for such advanced degree. It is advisable that such application be made as early as possible in the student's course. Where a thesis is required it shall be upon a subject approved by the department and, if for the doctor's degree, shall be presented in its final form, to the Chairman of the Committee on Graduate Study, at least six weeks before the close of the semester in which the degree is sought. Accepted theses for the master's degree shall be bound in a uniform style and deposited in the University Library. No advanced degree will be conferred except upon the recommendation of the Committee on Graduate Study.

Master of Arts

The degree of Master of Arts (A.M.) is conferred upon graduates of this University, and upon others who have had an equivalent training elsewhere, on the satisfactory completion, in residence, of one year of graduate work, beyond the baccalaureate requirements of the department in which the degree is sought, and on the presentation of an approved thesis, or the passing of a satisfactory examination, or both. At least two-thirds of the year's work required of the candidate is to be devoted to the major study. Work done in the University outside of the requirements for the degree must be registered, but will not be taken into account in connection with the degree.

Special regulations are as follows:

1. A report upon the character of the work done will be made by each instructor under whom a candidate is registered.

2. Some evidence of ability to do independent work is required of every candidate. In addition, therefore, to examination, a thesis is expected, unless such evidence is furnished in other ways.

Engineer

In the departments of applied science the professional degree of Engineer is conferred upon graduates of this University, and upon others who have had an equivalent training elsewhere, on the satisfactory completion, in residence, of one year of professional study beyond the baccalaureate requirements of the department in which the degree is sought, and on the presentation of an approved thesis, showing ability to do independent work.

Juris Doctor

The degree of Juris Doctor (J. D.) is conferred upon students who have previously received the academic degree of Bachelor of Arts, or its equivalent, upon the completion of a three years' professional law course as defined by the Department of Law.

Doctor of Medicine

The degree of Doctor of Medicine (M. D.) is conferred upon students who complete the four years' course in Medicine based upon the three years' pre-medical course as laid down by the University.

Doctor of Philosophy

The degree of Doctor of Philosophy (Ph. D.) is conferred upon graduates of this University, and upon others who have had an equivalent training elsewhere, on the satisfactory completion of at least three years of graduate work, beyond the baccalaureate requirements of the department in which the degree is sought, under the following conditions:

1. The degree is given only on the ground of advanced scholarship and the ability to do independent work in some special line, and not for merely faithful study for a prescribed time or course, nor for miscellaneous study. Three years represents the minimum time in which the degree can be obtained, and often a longer period of study will be necessary.

2. Graduate work done elsewhere may be accepted in place of resident study in this University; but in no case will private study without sufficient guidance, or pursued at a distance from libraries or laboratories or other necessary facilities, be accepted as an equivalent; and no degree will be granted to any person who has not spent at least the last year of such study in residence at this University.

3. All candidates will be required to show a reading knowledge of French and German, and this requirement must be fulfilled at least one year before the final examinations for the degree. The candidate's ability to read his special literature in these languages shall be tested by the faculty of the department in which the major subject is taken.

4. The course of study shall embrace one major subject and one or two minors. The minor subject or subjects shall represent approximately one-third of the course of study; except that such minor subjects may be waived on the recommendation of the department in which the major subject is taken and with the approval of the Committee on Graduate Study, when the breadth and extent of the candidate's training justify such a course—in which case the candidate will be expected to show such breadth of training in his oral examinations.

In the nature of the case the work offered as minors can not always be graduate work, but it should be advanced work and should, whenever possible, be planned as part of the course leading to the Ph. D. degree. If the work has been done before the student enters this University it shall be passed upon by the department in which it would have been done if taken here. This department is free to test the candidate as it sees fit.

5. The candidate must present a thesis of such a character as shall display power of original and independent investigation and constitute an actual contribution to knowledge. He must guarantee the printing of the thesis, in a form approved by the Committee on Graduate Study, within one year after the degree is conferred, and must deposit one hundred copies in the University Library.

6. The candidate must sustain final written examinations in major and minor subjects conducted by the department in which the study was taken and also shall submit to an oral test or examination by the special Examining Committee of the Faculty.

The special Examining Committee shall consist in each case of (1) the professor in charge of the major subject, (2) the one or more professors in charge of the minor subjects, (3) two members of the Committee on Graduate Study whose departments lie nearest to that

of the major professor, and (4) the Chairman of the Committee on Graduate Study, acting as its secretary.

The High School Teacher's Certificate

County, and City and County Boards of Education are authorized to grant High School Certificates (under Sections 1521, 1775, and 1792 of the Political Code of California) to candidates recommended by the University as having fulfilled the requirements laid down by the State Board of Education, and provided the institutions concerned "shall each certify to the high character of the work accomplished under its direction, and to the personal fitness of the candidate."

The requirements laid down by the State Board of Education will be met by accomplishing the work outlined in either of the following groups:

Group I

1. Graduation from a college requiring not less than eight years of high school and college training.

2. One year of graduate study in a university belonging to the Association of American Universities, part of the time at least being devoted to one or more of the subjects taught in the high school.

(The "year of graduate study" will be fulfilled (*a*) when the candidate has received the degree of Master of Arts, or (*b*) when the candidate has completed twenty six units of university work (four of which may be the practice teaching named below). At least one advanced or graduate course in the major department, of not less than four units, must be taken.)

3. Eight hours per week for one-half school year in the Department of Education, taken as a part of either the graduate or undergraduate course.

4. Practical teaching, equivalent to at least four hours per week for one-half school year, in a well-equipped school of secondary grade directed by the Department of Education of any of the universities belonging to the Association of American Universities, or in a school of grammar or secondary grade in connection with a California State Normal School, or under the direction of the Department of Education of the University of California, or of the Leland Stanford Junior University.

Group II

1. Graduation from a college requiring not less than eight years of high school and college training.

2. One-half year of graduate study in a university belonging to the Association of American Universities, part of the time at least being devoted to one or more of the subjects taught in the high school.

(The "half year of graduate study" will be interpreted as thirteen units of university work, including one advanced or graduate course in the major department of not less than two units.

3. (*a*) Graduation from a California State Normal School or other normal school officially recognized by the State Board of Education as of equivalent grade; *or* (*b*) twenty months' experience with decided success as a regular teacher or as principal in any reputable school, elementary or secondary; *or* (*c*) six months as student teacher in a well-equipped school of secondary grade directed by a California State Normal School, or its recognized equivalent, or in a school of grammer or secondary grade in connection with a California State Normal, or under the direction of the Department of Education of the University of California, or of the Leland Stanford Junior University.

The University Recommendation

In addition to the technical requirements prescribed by the State Board of Education the University will require, as preliminary to any recommendation for the high school teacher's certificate, the completion of enough work (and of sufficiently high grade), in at least one subject, to secure a Department recommendation that the candidate is fitted to teach the subject in high school classes.

The Department requirements for such recommendation are, in most cases, stated in the Register under the Department headings; but each candidate *should find out definitely* from the Departments concerned, not later than the beginning of the Senior year, preferably earlier, the particular requirements which must be met.

It is advisable that every candidate for the teacher's recommendation should endeavor to fulfil the Department requirements in at least *two* high school subjects.

For information and advice as to possible and desirable combinations of subjects for high school positions, students are invited to consult the Appointment Secretary.

The Grammar School Teacher's Certificate

Under Section 1775 of the Political Code of California, as amended March, 1909, County Boards of Education are authorized to grant,

without examination, grammar school certificates "to holders of diplomas of graduation of the four-year course of the University of California or Leland Stanford Junior University when said holder of such diploma shall have had six months' training in one of the State Normal Schools of this State or has had eight months' successful experience in teaching in the public schools of California after graduation."

Under Section 1543 of the Political Code of California, as amended March, 1909, County Superintendent of Schools are authorized "to issue temporary elementary certificates valid for two years to graduates of the University of California and to graduates of the Leland Stanford Junior University"; but "no person shall be entitled to receive a temporary certificate more than once in the same county."

Appointment Registry

The University undertakes (1) to keep a record of students and graduates who wish to teach, or to be transferred to other teaching positions, and (2) upon application of Boards of Education, School Trustees, or other officials, to recommend for suitable vacancies such candidates as seem most likely to succeed.

The University aims to obtain complete information with regard to the scholarship, experience, and personal qualifications of each candidate, and reports from instructors and others concerning the fitness of candidates are filed in the office of the Appointment Secretary. Such information is regarded as confidential, and general letters of recommendation are not given. Copies of such credentials as are on file will be mailed to school officials, at their request, or at the request of the candidate concerned. But the University reserves the right of refusing to extend its coöperation to students when they apply for positions for which they are manifestly unfit. Official recommendations for positions are made only upon request of those in authority. Letters requesting such recommendations should state explicitly the subjects to be taught, the salary to be paid per year, and the time when the engagement is to begin.

Blanks for registration may be obtained of the Appointment Secretary, at the Registrar's office, and should be filled out each year, preferably during March or April.

Communications should be addressed to the Appointment Secretary, Stanford University, California.

COURSES OF INSTRUCTION

GREEK

Augustus Taber Murray, Professor.
Ernest Whitney Martin, Assistant Professor of Greek and Latin.
Blanch Rible, Assistant.

With the co-operation of Messrs. Elmore and Knowlton of the Department of Latin.

Undergraduate Courses

Instruction in the lower classes is given chiefly by means of recitations, but as the student advances these are supplemented by lectures.

It will be seen that provision is made for those who have had no Greek before coming to the University.

The Teacher's Recommendation.—Courses 2, 3, 4, 7, and 17 constitute the minimum requirement for the high school teacher's recommendation in Greek.

1. **Elementary.**—Grammar; translation of easy prose; Greek composition. After the essential grammatical forms have been mastered, passages of continuous prose are taken up for translation, and, as soon as is practicable, the Anabasis. The student is made familiar with the ordinary forms of syntax, and exercises in writing Greek are regularly introduced. This course does not count as a part of the major work for students in Greek.

3 units, both semesters (Martin)

2. **Xenophon and Plato.**—Selections from Xenophon's Hellenica, with Plato's Apology and Crito. Open to those who have offered subject 22 on entrance, or who have completed course 1 in the University. 3 units, 1st semester (Elmore)

3. **The Odyssey and Herodotus.**—A continuation of course 2. Selections from the Odyssey and from Herodotus.

3 units, 2d semester (Knowlton)

4. **Prose Composition and Sight Translation.**—Simple prose is taken up for sight-reading, and the exercises are based upon the text read. Required of Greek major students in connection with courses 2 and 3. 2 units, both semesters (Martin)

5. **Homer.**—A critical study of the Iliad, with discussions and papers on Homeric topics. Prerequisites: courses 2 and 3, or an equivalent. 3 units, 1st semester (KNOWLTON)

6. **Euripides, Lucian, etc.**—The Alcestis of Euripides, selections from Lucian, and selections from the Lyric Poets. A continuation of course 7. 3 units, 2d semester (MURRAY)

7. **Greek Sculpture.**—Lectures, illustrated by stereopticon. Not open to first-year students. 2 units, 1st semester (MURRAY)

9. **Demosthenes.**—The De Corona, with extracts from Aeschines against Ctesiphon. 3 units, 1st semester (MURRAY)

10. **Thucydides.**—Book I. 3 units, 2d semester (MURRAY)

12. **Greek Testament.**—A study of the representative portions of the Greek text, with lectures. 2 units, both semesters (MARTIN)

12b. **Rapid Reading.**—The student and instructor meet weekly for individual reading in easy Greek, suited to the student's particular needs. Open to all who have had at least one semester of Elementary Greek. 1 unit, 2d semester (MURRAY, MARTIN, RIBLE)

13. **Introductory.**—An introduction to the study of the Greek language, based largely upon the Greek element in English, and leading to the rapid reading of the Anabasis. Open to all students. 3 units, 2d semester (MURRAY)

GRADUATE COURSES

The center of the Graduate work is the Greek Seminary—made up of the director and such students as satisfy him of their fitness for the work. The Seminary meets weekly for the critical interpretation of some Greek author, the different members, in turn, filling the post of interpreter. Topics for investigation are assigned, and papers prepared by the members are read and discussed.

Members of the Seminary are expected to supplement their critical work by wide reading, and lectures on the author or authors under discussion are given by the director. It is in the highest degree desirable that all members of the Seminary should be able to read both French and German.

14. **The Greek Seminary.**—In 1910-11 the Seminary was occupied with the study of Euripides. The Iphigenia Taurica was taken up for critical interpretation, and lectures on the dramatic art of Euripides were given. 4 to 6 units, both semesters (MURRAY)

15. **Rapid Reading.**—Graduate and advanced students meet weekly for the rapid reading of Euripides.

4 units, both semetsers (MURRAY)

SPECIAL LECTURES

Throughout the year Professor MURRAY gives lectures, twice weekly, on Greek Epic and Dramatic Poetry. These lectures are intended for general literary students, and do not presuppose a knowledge of Greek; they do not count as part of the major work for students in Greek. The courses are not open to incoming freshmen.

16. The Greek Epic. 2 units, 1st semester (MURRAY)

17. Greek Tragedy. 2 units, 2d semester (MURRAY)

LATIN

†HENRY RUSHTON FAIRCLOUGH, Professor.

JEFFERSON ELMORE, Associate Professor.

BENJAMIN OLIVER FOSTER, ERNEST WHITNEY MARTIN, Assistant Professors.

PHILIP ARNOLD KNOWLTON, Instructor.

ESTHER JEAN SPENCER, Assistant.

[With the co-operation of the Greek Department, and of Professor HEMPL of the Department of Germanic Languages.]

UNDERGRADUATE COURSES

The aim of the undergraduate courses in Latin is to give the student a somewhat systematic knowledge of the language and its development, an acquaintance with the representative authors of Latin literature, and some insight into the life, culture, and civilization of ancient Rome.

The Department recognizes two classes of major students: (1) those who wish to pursue a course of liberal studies, including Latin as a prominent feature; (2) those who, expecting to teach Latin, desire to be properly equipped for that purpose.

Students who wish to qualify for teaching Latin must take courses 2, 4, 5, 6, 7, 8, 9, and 17, together with such other courses as are recommended by the Department. To other students more freedom of choice is allowed.

†Absent on leave, 1910-11.

1a. **Introductory.**—After a sufficient knowledge of the forms and elements of syntax is acquired the time is devoted mainly to the reading of easy prose. Attention is also given to word formation and the derivation of technical terms. The course is given primarily for scientific and other students who desire at least one year of Latin and for those who wish to begin the subject with a view to further study.
3 units, both semesters (ELMORE)

1. **Virgil and Cicero.**—Virgil, selected books of the Æneid; Cicero, selected orations. This course is planned for those who have passed in 1*a* or entrance subject 21*a*. 3 units, both semesters (SPENCER)

2. **Terence, Cicero, and Horace.**—Terence, Andria; Cicero, De Senectute; Horace, Odes and Epodes; selections from Catullus. Open in either semester to students who have completed course 1, or who have offered entrance subject 21*b*. Two sections.
3 units, both semesters (FOSTER, ELMORE)

3. **Justinian.**—The Institutes of Justinian are read both as a training in language and as an introduction to some conceptions of the Roman Civil law. Open to Latin and Pre-Legal majors who have had three years of Latin. 2 units, both semesters (KNOWLTON)

4. **Prose Composition I.**—Practical exercises and rapid reading of easy prose. Open in either semester to first-year students.
2 units, both semesters (MARTIN)

5. **Horace.**—Satires and Epistles. Open to those who have completed course 2 or 3, or an equivalent. Attention is directed especially to the style and subject matter, to Horace's influence upon later literature, and to the salient features of the Augustan age.
3 units, 1st semester (MARTIN)

6. **Livy and Tacitus.**—Selections from Livy's History and the Annals of Tacitus. This course, complementary to course 5, involves a survey of Roman history and the literature of the early empire.
3 units, 2d semester (FOSTER)

7. **Prose Composition II.**—Open to students who have taken course 4, or an equivalent. 2 units, both semesters (FOSTER)

8. **Roman Comedy.**—The Trinummus of Plautus and the Phormio and Adelphoe of Terence. Attention is paid to early forms, constructions, and meters, and to the staging of a Roman play, with some consideration of the differences in style and dramatic art between the two playwrights. 2 units, 1st semester (FOSTER)

9. **The Letters of Cicero.**—Selections from the correspondence are read with a view to obtaining a conception of Cicero's character as a man and to becoming acquainted, as far as possible, with the social and political conditions of the time.

2 units, 2d semester (FOSTER)

10. **Pliny and Seneca.**—Selections from the works of the younger Pliny and Seneca. 2 units, 1st semester (KNOWLTON)

11. **Roman Elegy.**—Selections from Catullus, Tibullus, and Propertius. [Not given in 1910-11.] 2 units, 1st semester (FOSTER)

12. **Lucretius.**—Selections from the De Rerum Natura are read with particular attention to the philosophic thought and its poetic treatment. 2 units, 2d semester (KNOWLTON)

13. **Prose Composition III.**—A course for advanced students. [Not given in 1910-11.] 1 unit, both semesters (FAIRCLOUGH)

14. **Juvenal and Martial.**—Selections from the Satires of Juvenal and the Epigrams of Martial, with supplementary reading in other writers of the first century. 2 units, 1st semester (FOSTER)

15. **Quintilian.**—Book X. Rhetoric and literary criticism among the Romans. [Not given in 1910-11.]

2 units, 1st semester (FAIRCLOUGH)

17. **Teachers' Course.**—Lectures on methods of teaching Latin, with practical exercises. Open only to advanced students.

2 units, 1st semester (ELMORE)

18. **Cicero's Philosophical Works.**—Selections from the Tusculan Disputations and the other philosophical works are read with special reference to Cicero's Greek predecessors.

2 units, 2d semester (KNOWLTON)

19. **Roman History from the Sources.**—Cæsar's Civil War. [Not given in 1910-11.] 2 units, 1st semester (FOSTER)

20. **The Roman Novel.**—The Cena Trimalchionis of Petronius, and selections from Apuleius. [Not given in 1910-11.]

2 units, 2d semester (FOSTER)

GRADUATE COURSES

These courses are open to graduates in Latin who have had at least two years' undergraduate work in Greek. The ability to read French and German is also very desirable, and, in the case of candidates for the degree of Ph. D., necessary. The aim of the courses is to give the

student a thorough grasp and detailed knowledge of particular authors, and of certain periods and fields of literary activity, as well as a training in literary criticism, and an acquaintance with the methods of original research.

22. Latin Seminary.—In 1910-11 the Seminary was devoted to a study of Cicero's Letters. The work consisted of lectures, reading of the text, reports, and investigation of special problems.

2 to 6 units, both semesters (Elmore)

23. Roman Elegy.—Selections from the Corpus Tibullianum, Propertius, and Ovid, accompanied by lectures on the development of elegiac poetry among the Greeks and Romans.

2 units, 2d semester (Foster)

24. Introduction to Latin Paleography.—Lectures and practice in reading facsimiles of manuscripts.

1 unit, 1st semester (Foster)

25. Introduction to Latin Epigraphy.—Lectures with studies in the Corpus Inscriptionum. 2 units, 2d semester (Martin)

26. Oscan and Umbrian.—The study of the grammar is accompanied by a reading of the more important inscriptions. [Not given in 1910-11.] 2 units, 2d semester (Foster)

27. Venetic.—Lectures on Venetic and neighboring dialects.

2 units, 1st semester (Hempl)

28. Etruscan.—Lectures on the nature of the language and its relation to other Italic dialects. 2 units, 2d semester (Hempl)

Special Courses

29. History of Rome.—A general course, open to all students.

2 units, 2d semester (Elmore)

31. Roman Art and Monuments.—A survey of the topography, architecture, sculpture, and other art-forms of ancient Rome and the provinces, illustrated with lantern-slides. This course, illustrative of Roman history and literature, is intended mainly for major students in Latin. Others must receive special permission from the instructor before registering. [Not given in 1910-11.]

2 units, 2d semester (Fairclough)

32. Roman Private Life.—Lectures, illustrated with lantern slides from ancient art and other sources. Open to all, but of special importance to Latin students.

2 units, 1st semester (Knowlton)

33. Roman Political Institutions.—Lectures and assigned reading on the development and operation of the most important features of the Roman government. Open to all students. [Not given in 1910-11.] 2 units, 2d semester (ELMORE)

GERMANIC LANGUAGES

GEORGE HEMPL, JAMES OWEN GRIFFIN, Professors.
KARL G. RENDTORFF, WILLIAM ALPHA COOPER, Associate Professors.
MACY MILLMORE SKINNER, Assistant Professor.
BRUNO BOEZINGER, HERMANN HILMER, Instructors.
BRUNO BOEZINGER, HERMANN HILMER, Instructors.

The advanced courses are intended primarily for those students who are candidates for the degrees of Master of Arts and Doctor of Philosophy; but special consideration is also given to the needs of those who intend to make the teaching of German their profession. Graduate work in the Germanic languages is facilitated by the opportunities offered by the library of the late Professor Hildebrand of Leipzig, which contains a rich and well-chosen collection of works on German philology and literature.

The attention of all students of German is called to the course in the history of Germany, given as course 12 in the Department of History. This course should be taken as early as possible.

Students who intend to teach German are expected to take at least courses 3, 6, 7, 8, 13*b*, 14, 16, 22, and either 9, 10, or 11. See also the notes to courses 2 and 13, and the note above course 9.

1. Elementary.—It is the object of this course to put the learner in possession of the elements of the German language. This implies: (1) a personal command of simple German, that is, the ability to understand such German whether heard or read, and to employ the language in simple conversation, narration, and description, both orally and in writing; (2) such a ready familiarity with the elements of German grammar as is essential for the attainment of this command of the language. 5 units, both semesters (COOPER, SKINNER, HILMER)

2. Second-year German.—(See note below.)

a. Reading.—Texts suitable for the second year; for the most part, the writings of contemporary authors.

3 units, both semesters (HEMPL, GRIFFIN, SKINNER)

aa. Scientific Reading.—Texts selected with a view to preparing scientific students to read technical literature.

3 units, both semesters (BOEZINGER)

b. Reproduction and Production, oral and written.—The work of this course is intended to assist the pupil in getting a personal command of German, both spoken and written; with it is correlated a thorough review of the elements of the grammar.

2 units, both semesters (GRIFFFIN, COOPER, BOEZINGER)

Note.—Students expecting to continue the study of German beyond the second year are supposed to have completed both *2a* and *2b* or an equivalent.

3. Classical German Drama.—This course aims chiefly to be an introduction to the spirit of the classical German drama; but throughout the course an effort is also made to familiarize the student, by means of various selected readings, with the life and character of the German people. 3 units, both semesters (GRIFFIN, RENDTORFF)

4. Modern German Drama.—Lectures in connection with the interpretation and rapid reading of some of the more important works of the modern dramatists. 2 units, both semesters (GRIFFIN)

5. Modern German Novels.—The reading of standard modern novels, with lectures on the development of the novel.

2 units, both semesters (SKINNER)

6. Advanced German Grammar.—A systematic presentation of the important facts of German grammar, together with individual investigations of the usage of various writers

2 units, both semesters (HEMPL)

7. German Composition.—By composition is meant, not translation from English, but practice in putting one's thoughts into acceptable written German.

2 units, both semesters (BOEZINGER, HILMER)

8. Advanced Composition.—

2 units, both semesters (BOEZINGER)

Note.—Students wishing to take up any of the three following courses (9, 10, 11) will be expected to have such preparation as can be obtained by pursuing courses 3 and either 4 or 5.

9. Lessing.—Lectures on Lessing's life and times, with reading and discussion of his principal works. [Not given in 1910-11.]

3 units, both semesters (———)

10. **Schiller.**—Lectures on his life, together with interpretation and discussion of his writings.

3 units, both semesters (SKINNER)

11. **Goethe.**—

a. Lectures on Goethe's life and works, and reading of selected poems. 3 units, both semesters (COOPER)

b. Goethe's Faust: Urfaust, Fragment of 1790, Part First and Part Second. [Not given in 1910-11.]

3 units, both semesters (COOPER)

13. **The History of German Literature.**—Lectures and readings.

a. From the earliest times to the eighteenth century.

2 units, both semesters (RENDTORFF)

b. The eighteenth and nineteenth centuries. [Not given in 1910-11.]

2 units, both semesters (RENDTORFF)

Note.—Students electing course 13 are expected to have pursued a general course in the history of English literature and to be able to read German with facility.

14. **Teachers' Course.**—Lectures on the various methods employed in teaching modern languages, together with practical advice in the matter of conducting classes.

2 units, 2d semester (HEMPL)

15. **The Genesis of Grammar.**—Lectures on the origin and development of the parts of speech and of other grammatical apparatus. [Not given in 1910-11.] 2 units, 1st semester (HEMPL)

16. **Middle-High German.**—Grammar and selected texts (first semester); Walter von der Vogelweide (second semester).

2 units, both semesters (RENDTORFF)

16b. **Advanced Middle-High German.**—

2 units, both semesters (RENDTORFF)

17. **Old-High German.**—

2 units, both semesters (BOEZINGER)

18. **Old Norse.**—[Not given in 1910-11]

2 units, both semesters (HEMPL)

19. **Old Gothic.**—[Not given in 1910-11.]

2 units, both semesters (HEMPL)

20. **The Runes.**—Lectures on the origin and development of primitive Germanic writing. [Not given in 1910-11.]

2 units, 1st semester (HEMPL)

21. **The History of German Civilization.**—This course is intended for students of German who wish to become acquainted with the development of German civilization in its relation to German literature.

a. From the earliest times to the Reformation.

2 units, both semesters (RENDTORFF)

b. From the beginning of the Reformation to the present t

[Not given in 1910-11.]

2 units, both semesters (RENDTORFF)

22. **The History of Germany.**—[See cou.. e 12 in the Department of History, and the note at the beginning of this section, page 36.]

23. **Thesis Course.**—Special investigations and reports intended to furnish training in preparation for original research work. Under the direction of the various members of the staff. Credit subject to individual adjustment.

[See courses 27 and 28 in the Department of Latin.]

ROMANIC LANGUAGES

†JOHN ERNST MATZKE, Professor.

OLIVER MARTIN JOHNSTON, COLBERT SEARLES, Associate Professors.

CLIFFORD GILMORE ALLEN, ALBERT LÉON GUÉRARD, AURELIO MACEDONIO ESPINOSA, Assistant Professors.

CHARLES ALEXANDRE GUÉRARD, Acting Instructor.

HENRY HAXO, FREDERICK POPE ANDERSON, Assistants.

The undergraduate courses in the Romanic Languages are planned so as to give students an intimate acquaintance with the modern forms of the languages spoken in the principal neo-latin countries. To this end systematic attention is paid to pronunciation, reading, syntax, and conversation. In the higher courses special emphasis is laid on the study of literature. In order to give students an opportunity to become familiar with the spoken idioms, several of the advanced courses are conducted as much as possible in the language which forms the object of study.

The Department recognizes two classes of major students: (1) students who expect to teach French or Spanish and who wish to take up the study from the point of view of the specialist; (2) students who desire to group a course of study of a general nature around that of French or Spanish.

†Died September 18, 1910.

Either French or Spanish may be selected as a major subject. In French the minimum requirement consists of courses 2, 3, 4, 5, 6, 7, 8, 9, 10, and 11. In Spanish the same requirement includes courses 12, 13, 14, 15, 16, 17, and 18.

In addition major students who intend to teach either French or Spanish will be expected to take Latin 1, 2, and 4, German 1 and 2, and Elementary French or Spanish or Italian.

The Teacher's Recommendation.—The minimum requirement for the High School recommendation is as follows: In French—courses 2, 3, 4, 6, 7, and 8; in Spanish—courses 12, 13, 14, 15, 16, 17. The Department will insist also on courses 22 and 23. Recommendations will be given only on the vote of the Department, and will demand a degree of scholarship above the ordinary passing mark.

1a. **Elementary French.**—Fraser and Squair, French Grammar, with written and oral exercises and systematic training in French pronunciation on the basis of Matzke's Primer of French Pronunciation; Aldrich and Foster's French Reader.

3 units, both semesters (C. A. Guérard, Haxo, Anderson)

1b. **Elementary French, Reading Course.**—The course is intended for students who merely desire to obtain a reading knowledge of the language. Aldrich and Foster, Foundations of French; Aldrich and Foster's French Reader; Mérimée, Colomba.

3 units, both semesters (C. A. Guérard)

[Courses 1*a* and 1*b* are continuous courses, open to all, but students desiring to enter after the end of the second week will be admitted only upon special examination.]

2. **Second-year French Composition.**—François, Advanced French Prose Composition. Open to students who have completed course 1*a*, or who have received credit for entrance subject 19*a*.

2 units, both semesters (C. A. Guérard)

3. **Modern French Reading.**—Translation of selected texts in prose and verse. Open to students who have completed course 1*a* or course 1*b*, or who have received credit for entrance subject 19*a*.

2 units, both semesters

(A. L. Guérard, Allen, C. A. Guérard)

4a. **French Conversation.**—There are three meetings of the class during the week, for which one unit of credit is given toward graduation. Open to students who have completed course 1*a*, or who have received credit for entrance subject 19*a*.

1 unit, both semesters (A. L. Guérard)

4b. **French Pronunciation.**—Practice in French pronunciation with the phonograph, required for one semester of all students registering for course *4a*, unless excused by the instructor, and open to others likely to profit by such practice as far as the limitations of time and space will permit. One class exercise and two practice hours each week. 1 unit, either semester (SEARLES)

[Courses 2, 3, and 4 constitute the second year's work in French, and should, if possible, be taken during the same year. Course 4 may not precede course 2.]

5. **Reading and Writing of French.**—An intermediate course in reading and composition intended primarily for students entering with entrance subjects *19b* or *19c*.

3 units, both semesters (A. L. GUÉRARD)

6. **Advanced French Prose Composition.**—Translation into French of selected English prose. Open to students who have completed course 2 or course 5.

2 units, both semesters (A. L. GUÉRARD)

7. **Outline Course in the History of French Literature.**—Lectures, supplemented by reading and reports by the members of the class. Not open to Freshmen. Prerequisite: course 3 or course 5.

3 units, both semesters (SEARLES)

8. **Classical French.**—A study of the principal authors of the classical period. Representative texts will be read from the works of Corneille, Racine, Molière, Voltaire, Le Sage, La Fontainê, and Boileau. Not open to Freshmen. Prerequisites: courses 2 and 3, or course 5, or their equivalent. 3 units, both semesters (SEARLES)

9. **History of French Literature in the Nineteenth Century.**—Lectures, with reading of the principal authors and reports by the members of the class. Open to students who have completed courses 7 or 8. 2 units, both semesters (SEARLES)

[With permission Juniors and Seniors in other departments may register for one unit of credit in course 9 and be excused from the supplementary reading.]

10. **Jean-Jacques Rousseau.**—A study of Rousseau, his philosophy and influence. The course will be conducted in French. Open to students who have completed courses 2, 3, and 4, or their equivalent.

2 units, 1st semester (A. L. GUÉRARD)

11. **Modern French Historians.**—Jullian, Extraits des Historiens Français du XIXe siècle; Seignobos, Extraits Historiques de Michelet;

Taine, Introduction à l'Histoire de la Littérature Anglaise. The course will be conducted in French. [Not given in 1910-11.]

2 units, 2d semester (A. L. GUÉRARD)

12. **Elementary Spanish.**—Wagner, Spanish Grammar; Matzke, First Spanish Readings. A continuous course open to all.

3 units, both semesters (ALLEN, ESPINOSA)

13. **Second-year Spanish Composition.**—Ramsey, A Text-book of Modern Spanish; Umphrey, Spanish Prose Composition. Open to students who have completed course 12, or who have received credit for entrance subject 18*a*. 2 units, both semesters (ALLEN)

14. **Modern Spanish Reading.**—Translation of selected texts in prose and verse. Open to students who have completed course 12 or who have received credit for entrance subject 18*a*.

2 units, both semesters (ESPINOSA)

15a. **Spanish Conversation.**—There are three meetings of the class during the week, for which one unit of credit is given. Open to students who have completed course 12, or its equivalent.

1 unit, both semesters (ESPINOSA)

15b. **Spanish Pronunciation.**—Practice in Spanish pronunciation with the phonograph is open to students likely to profit by such practice, as far as the limitations of time and space will permit.

1 unit, either semester (ALLEN)

[Courses 13, 14, and 15 constitute the second year's work in Spanish, and should, if possible, be taken during the same year. Course 15 may not precede course 13.]

16. **Advanced Spanish Composition.**—Translation into Spanish of selected English prose. Open to students who have completed course 13, or its equivalent.

2 units, both semesters (ESPINOSA)

17. **Classical Spanish.**—A study of the principal authors of the classical period. Representative texts will be read of Cervantes, Lope de Vega, Calderón, Alarcón, Tirso de Molina, as well as selections from Ford's A Spanish Anthology. Open to students who have completed courses 13 and 14 or their equivalent.

2 units, both semesters (ALLEN)

18. **Outline Course in the History of Spanish Literature.**—Lectures with reading of important works and reports by the members of the class. Open to students who have completed course 17 or its equivalent. [Not given in 1910-11.]

2 units, both semesters (ALLEN)

19. **Elementary Italian.**—Gaffino, A New Grammar of the Italian Language; Bowen, First Italian Readings; Manzoni, I Promessi Sposi. A continuous course open to all.

3 units, both semesters (JOHNSTON)

20. **Advanced Italian.**—Dante, La Divina Commedia. Translation course open to students who have completed course 19.

2 units, both semesters (JOHNSTON)

21. **Dante and the Divine Comedy.**—Lectures open to Juniors and Seniors in all departments. [Not given in 1910-11.]

2 units, 2d semester (JOHNSTON)

[Course 20 alternates with course 21.]

22. **Phonetics.**—Lectures on the organs and the nature and formation of speech sounds with special reference to the pronunciation of French. Intended particularly for teachers of language. Open only to advanced students. 2 units, 1st semester (MATZKE)

23. **Teachers' Course in French.**—Lectures on methods of teaching French, study of the available text-books, and review of French grammar. Open only to advanced students.

1 unit, 2d semester (MATZKE)

[Courses 22 and 23 are offered in alternate years; they were not given in 1910-11.]

24. **Vigny.**—A study of Alfred de Vigny and his position in the Romantic Movement. 3 units, 1st semester (A. L. GUÉRARD)

25. **Introduction to the Study of Old French.**—Reading of selected passages from Bartsch-Wiese, Chrestomathie de l'Ancien Français (Leipzig, Vogel, 1908), with a study of Old French Phonology and Morphology. 2 units, 1st semester (JOHNSTON)

26. **French Historical Grammar.**—Lectures on Old French Phonology and Morphology.

2 units, both semesters (JOHNSTON)

27. **Old French Literature.**—Lectures on the history and development of Old French Literature.

2 units, 2d semester (JOHNSTON)

28. **Floire et Blancheflor.**—A translation of the two Old French poems on *Floire et Blancheflor,* with lectures on the origin and growth of the legend. 3 units, 2d semester (JOHNSTON)

29. **Journal Club.**—The instructors in the department and the advanced students meet regularly on alternate Fridays for the discussion of the periodicals and new books.

ENGLISH LITERATURE AND RHETORIC

Alphonso Gerald Newcomer, Professor.
Raymond Macdonald Alden, Associate Professor.
†Samuel Swayze Seward, Jr., †Howard Judson Hall, Lee Emerson Bassett, Henry David Gray, William Dinsmore Briggs, Assistant Professors.
John Kester Bonnell, Theresa Peet Russell, Everett Wallace Smith, Edith R. Mirrielees, Instructors.
Evelyn Wight Allan (Dean of Women).

Requirements for the Degree of Bachelor of Arts

a. The courses in Chaucer, Shakespeare, Milton (or Spenser or Wordsworth), History of English Literature (course 30 in the second year, 32 in the third year, and 31 in the fourth year), besides such preliminary courses in vocal training, composition, or literature as may be requisite in each individual case.

b. English History. Students entering credited with Entrance Subject 16 are considered as having fulfilled this requirement.

c. A sound knowledge of at least one foreign language and its literature—ordinarily interpreted as requiring a minimum of 16 units in the chosen language, not including Latin 1, German 1, or French 1.

In general, students are encouraged to include among their elected studies Latin or Greek (not less than two years; or, in case Latin or Greek be selected to meet requirement *c* above, one modern foreign language), Anglo-Saxon, and a course in science, with laboratory work. Students preparing for journalism may substitute for the more advanced courses in literature, courses in Advanced Composition, History, Economics, and Social Science.

The Teacher's Recommendation.—Recommendation for the Teacher's Certificate in English is granted only by vote of the department on the basis of approved scholarship, and upon the completion of a certain amount of prescribed work. The undergraduate courses to be usually prescribed are, in the Department of English Literature, Vocal Expression, Composition, Prosody, Shakespeare, Milton, Teachers' Course, and one course in the history of literature, and, in the Department of English Philology, Anglo-Saxon and Chaucer. Graduate study shall be taken in accordance with the following regulation:

†Absent on leave, 1910-11.

Graduate Study

A graduate student in the Department of English Literature is expected to take within the year at least twenty units in courses (of whatever department) recognized as of an advanced or graduate character; and of these at least four must be in English Literature and four in English Philology.

Advanced Degrees

The preliminary requirements for entrance upon a course for an advanced degree in English are:

a. The course for the degree of A. B. in English or its equivalent.

b. An elementary knowledge of Anglo-Saxon.

c. A sound knowledge of two foreign languages (preferably one ancient and one modern language).

A candidate for the Master's degree in English Literature must take in all at least twenty units of advanced or graduate courses, of which at least six must be in English Literature and six in English Philology. If a Master's thesis is registered as a part of the work of either or both semesters, it may be credited (according to the judgment of the instructor under whose guidance it is being written) to the amount of three to five units a semester; but not more than four of such units in the year may apply toward the twelve units required in the two departments.

Preliminary and General Courses

(*Open to all students unless otherwise specified.*)

A. Elementary Composition.—A one-semester course required of all first-year undergraduates except those who show themselves entitled to exemption. 1 unit, either semester (Mirrielees)

1. Vocal Expression.—Courses in Vocal Expression are open to a limited number of students in the order of their application. Applications should be made before the first meeting of the class in the semester, and the instructor reserves the right to refuse to enroll students who do not appear at the first session of the class.

a. The Speaking Voice.—Lectures on the voice and how to use it, class drill and exercises, personal conferences. Prerequisite to all other courses in Vocal Expression. 1 unit, either semester (Bassett)

b. Reading Aloud.—A study of the principles of expressive reading, and the vocal interpretation of masterpieces in prose and poetry. As a

part of the work of the course each student is expected to memorize and vocally interpret 350 lines of Shakespeare during the semester.

2 units, either or both semesters (BASSETT, BONNELL)

c. Extemporaneous Speaking.—The preparation and delivery of short original speeches on subjects of current interest.

2 units, either semester (BASSETT, BONNELL)

2. **English Composition.**—Practical work in narration and description, first semester; practical work in exposition, second semester.

2 units, both semesters (NEWCOMER, BRIGGS, RUSSELL, SMITH)

3. **Note Taking.**—Practice in the taking of notes, both from lectures and reading, and in the preparation of abstracts and summaries. [Not given in 1910-11.]

1 unit, either semester (SEWARD)

4. **Modern English.**—The spoken language. Lectures on the relation of English to other tongues, the history and character of its vocabulary, standards of pronunciation, etc.

2 units, 2d semester (NEWCOMER)

5. **English Classics.**—The chief living books of English Literature from Le Morte Darthur to the Idylls of the King. Lectures and readings, with outlined reading for the class. Not open to English majors.

3 units, both semesters (RUSSELL)

6. **Introduction to Poetry.**—A study of the nature, methods, and varieties of poetry, the elements of poetic form, and the elements of poetic criticism.

3 units, 1st semester (GRAY)

6a. **Tennyson.**—A study of selected portions of Tennyson's poems, illustrating the growth of his literary art. A general course, designed for first-year students, and open to third-year and fourth-year students only by permission.

3 units, 2d semester (BONNELL)

9. **English Bible.**—Representative portions of the Old Testament studied as literature, with some consideration of the history and the prose style of the English versions. Not open to first-year students.

3 units, 2d semester (ALDEN)

10. **Shakespeare.**—A study of a number of plays selected to illustrate both the scope of Shakespeare's genius and the development of his art. Designed primarily for English major students. Not open to first-year students.

2 units, both semesters (NEWCOMER)

10a. **Shakespeare.**—A rapid consideration of a number of the plays in their larger aspects. Open to second-year students of all departments.

3 units, 1st semester (GRAY)

Advanced and Special Courses

I. VOCAL EXPRESSION

(Course 1 prerequisite.)

14. Vocal Interpretation.—*a.* An advanced course in the vocal interpretation of literature. Designed particularly for those who intend to teach English literature. Prerequisites: courses 1*a* and 1*b*.

2 units, 1st semester (Bassett)

b. Dramatic Literature (second semester). A careful analysis of two or three plays of Shakespeare. Members of the class will vocally interpret characters and scenes assigned for individual study. Prerequisite: course 14*a*. 2 units, 2d semester (Bassett)

15. Public Speaking.—Practice in the preparation and delivery of speeches adapted to various audiences and occasions, with attention to the style of spoken discourse based on a study of masterpieces of oratory. Prerequisites: courses 1*a*, and 1*b* or 1*c*.

2 units, both semesters (Bassett, Bonnell)

II. WRITTEN AND ORAL EXPRESSION

(Course 2 prerequisite.)

21. Advanced Composition.—Including both rapid writing and the preparation of long themes.

2 units, both semesters (Russell)

22. News Writing.—Practice in abstracting and condensing, writing within time and space limits, copy-reading and headline writing; together with instruction in methods of gathering news and in the duties of the various members of a newspaper staff.

3 units, both semesters (Smith)

23. Narration.—The principles of invention and style in their practical application to narrative art. Open by permission to third-year and fourth-year students.

2 units, both semesters (Gray)

24. Argument.—The theory of argumentation, with practice in the preparation of briefs and forensics. Open to students in the third and fourth years. 2 units, both semesters (Alden, Briggs)

25. Oral Debate.—Practice in the preparation and delivery of oral arguments, chiefly on current public questions. Open to a limited number of students who have taken, or are taking course 24, to be admitted in the order of application. [Not given in 1910-11.]

2 units, both semesters (Alden, Bassett)

28. **Teachers' Course in English.**—A study of the methods of teaching Composition (first semester) and Literature (second semester) in secondary schools. Open to students in senior year.

2 units, both semesters (ALLAN)

III. HISTORY AND INTERPRETATION OF LITERATURE

30. **Survey of English Literature.**—Lectures, supplementing an outline study of the history of English literature. Required of English major students; open to others who have done, or who may be doing, sufficient reading. 2 units, 2d semester (BRIGGS)

31. **History of Early English Literature.**—From the beginning to 1557. (English Philology 3.) Open to fourth-year students.

3 units, 1st semester (FLÜGEL)

32. **History of Modern English Literature.**—(*a*) From 1557 to 1700 (first semester). (*b*) From 1700 to 1798 (second semester). Open to third-year students.

3 units, both semesters (BRIGGS, ALDEN)

33. **Early Nineteenth Century Literature.**—The age of Wordsworth, Coleridge, Scott, and the Reviewers. Open to students of all departments in the third and fourth years.

3 units, 1st semester (ALDEN)

34. **Later Nineteenth Century Literature.**—Arnold, Clough, Rossetti, and contemporary poets. Open to students of all departments in the third and fourth years. 3 units, 2d semester (GRAY)

35. **English Fiction.**—A course in the history of English Fiction, with emphasis on the rise and development of the novel in the eighteenth and nineteenth centuries. Open to third-year and fourth-year students. [Not given in 1910-11.]

2 units, both semesters (BRIGGS)

36. **Satire.**—Open to those who have not had English 7. [Not given in 1910-11.] 2 units, 2d semester (RUSSELL)

37. **Elizabethan Drama.**—A survey of English dramatic literature from its origins to the closing of the theatres, omitting Shakespeare. Open to students of all departments in third and fourth years.

3 units, 2d semester (GRAY)

38. **The Modern Drama.**—A study of certain significant dramas of Ibsen, and of contemporary dramatists, considered largely from a structural point of view. Open to students of all departments in the third and fourth years. [Not given in 1910-11.]

3 units, 2d semester (GRAY)

39. Prosody.—A study of the principles and history of English versification. Open to English students in the third and fourth years. . . 2 units, 2d semester (ALDEN)

41. Spenser.—The Faerie Queene in its relation to the epics of chivalry. [Not given in 1910-11.] 3 units, 2d semester (BRIGGS)

42. Milton: Paradise Lost.—Open to students of English in the third and fourth years; to students of other departments in the fourth year. 3 units, 1st semester (NEWCOMER)

43. Wordsworth, Byron, and Shelley.—Lectures and interpretations. Open to third-year and fourth-year students. [Not given in 1910-11.] 3 units, 1st semester (NEWCOMER)

48. Jonson.—A study of Jonson's work and his position in English literature. Designed primarily for graduate students, but seniors may be admitted on recommendation.
2 units, both semesters (BRIGGS)

51. The Development of English Prose.—From Malory to Dryden, with special attention to the writers of the seventeenth century. [Not given in 1910-11.] 2 units, 2d semester (NEWCOMER)

52. Theory of Poetry.—A study of the principal problems connected with the definition, classification, and criticism of poetry, and of the history of their critical treatment, with special reference to English literature. 2 units, 1st semester (ALDEN)

53. English Lyric.—Studies in the lyric as a poetic form, and its development in England to the seventeenth century. [Not given in 1910-11.] 2 units, 1st semester (ALDEN)

55. Shakespeare.—A study of Hamlet and of the history of Hamlet criticism. 2 units, 2d semester (NEWCOMER)

ENGLISH PHILOLOGY

EWALD FLÜGEL, Professor.
WILLIAM DINSMORE BRIGGS, Assistant Professor (Department of English Literature).

1. Anglo-Saxon.—Anglo-Saxon Grammar and translation of select passages in prose. 3 units, 1st semester (BRIGGS)

2. Chaucer.—This course is an elementary one, and includes an outline of Middle English Grammar for the beginner.
2 units, 1st semester (FLÜGEL)

3. History of Early English Literature (to 1557).—[See English Literature 31.]
3 units, 1st semester (FLÜGEL)

ADVANCED AND GRADUATE COURSES

In order to prepare the future high school teachers satisfactorily, candidates for the Teachers' Recommendation in English are expected to take, besides the work in Literature, a whole year's advanced work in English Philology. If properly prepared they will be admitted to the Seminary and other advanced courses during the second semester of their senior year. Candidates for the Master's degree are expected to do at least a year's post-graduate work in English Philology, for which a reading knowledge of German, French (old and modern), and Latin is a prerequisite.

4. Middle English Grammar.—
2 units, 1st semester (FLÜGEL)

5. Beowulf.—[Not given in 1910-11.]
2 units, 2d semester (BRIGGS)

6. English Paleography.—[Not given in 1910-11.]

7. Middle English Exercises.—Piers, Plowman.
2 units, 2d semester (FLÜGEL)

8. Chaucer (advanced course).—Interpretation of the Prologue, the "Links," and lectures on the history of Chaucer criticism. Prerequisite: course 2 or its equivalent.
2 units, 2d semester (FLÜGEL)

9. Ballads and Lyrics of the Sixteenth Century.—
2 units, 2d semester (FLÜGEL)

10. History of English Philology.—Lectures. [Not given in 1910-11.]
2 units, 2d semester (FLÜGEL)

11. Seminary: Research Work in Word History.—Papers and lectures.
2 units, both semesters (FLÜGEL)

BIBLICAL HISTORY AND LITERATURE

DAVID CHARLES GARDNER, Lecturer.
RAYMOND MACDONALD ALDEN (English Literature), Associate Professor.
ERNEST WHITNEY MARTIN (Greek and Latin), Assistant Professor.

1. Life and Teaching of Christ.—The history of the life and times of Jesus, with a study of His words as recorded in the gospels.

and the application of that teaching to the life of to-day. Lectures, discussions, and papers. 1 unit, both semesters (GARDNER)

[**Greek Testament.**—A study of representative portions of the Greek text, with lectures. Course 12 in the Department of Greek. 2 units, both semesters (MARTIN)]

[**English Bible.**—Representative portions of the Old Testament studied as literature, with some consideration of the history and the prose style of the English versions. Not open to first-year students. Course 9 in the Department of English Literature. 3 units, 2d semester (ALDEN)

PHILOSOPHY

HENRY WALDGRAVE STUART, Professor.
*ADDISON WEBSTER MOORE, Acting Professor.
†GEORGE HOLLAND SABINE, Assistant Professor.
FLORENCE MIRIAM WOODHEAD, Assistant.

Courses in Philosophy are not open to first-year students.

1. **Elementary Logic.**—The principles of Deductive and Inductive Logic with special attention to the important types of fallacy. 3 units, 1st semester (STUART)

2. **Elementary Ethics.**—The ethical as compared with other meanings of Good and Bad. The rise of the distinction, in its ethical sense, in the experience of the individual. The working principles upon which our judgments of ethical goodness and badness are based. Reference will be made under each head to the more instructive historic theories. Assigned readings, with a syllabus. 3 units, 1st semester (STUART)

3. **History of Philosophy.**—A general course covering the development from the early Greek period to the end of the eighteenth century in Germany, and closing with a brief outline of the main philosophical problems of the nineteenth century. [Not given in 1910-11.] 3 units, both semesters (SABINE)

3a. **The Meaning of Modern Philosophy.**—The main outlines of the history of philosophy from 1600 down to recent times, with spe-

*Second semester, 1910-11.
†Absent on leave, 1910-11.

cial reference (1) to the interactions of philosophy with social and political movements and with the sciences, and (2) to the changing conceptions of the general problem and aims of philosophy. No prerequisite.
3 units, 2d semester (MOORE)

4. **Philosophy of the Nineteenth Century.**—The development of philosophical problems and theories since Kant. Prerequisite: course 3. [Not given in 1910-11.] 3 units, 1st semester (SABINE)

5. **Philosophy in the Life of the Nineteenth Century.**—[Not given in 1910-11.] 3 units, 2d semester (SABINE)

6. **Advanced Logic.**—A study of methods of investigation in use in the natural and social sciences, leading to a discussion of the cardinal assumptions and principles on which these methods are based. Selected investigations from different fields constitute the material for discussion. Prerequisite: course 1 or an equivalent.
3 units, 2d semester (STUART)

7. **Practical Ethics.**—The ethical aspects of certain contemporary personal and social problems, and the mental attitude with which the individual should come to their consideration. A comparative study of the treatment of these and similar problems in earlier systems of morality and ethics. A continuation of course 2.
3 units, 2d semester (STUART)

8. **History and Applications of the Theory of Evolution.**—[Not given in 1910-11.] 2 units, 2d semester (SABINE)

8a. **Evolution and Philosophy.**—The bearings of the doctrine of evolution upon various phases of the problem of man's relations to nature and upon certain issues in contemporary philosophy. Certain typical historic systems of philosophy considered from the point of view of the modern conception of evolution. Prerequisite: course 3 or course 8 in Philosophy, or course 8 in Bionomics.
3 units, 2d semester (MOORE)

9. **Outlines of General Philosophy.**—The nature of philosophy and the principal problems arising in the attempt of philosophy to take a unified view of the world. An elementary study of the answers given by the various types of philosophic thought, as presented in certain well known recent books of a popular character. No prerequisite in 1910-11.
2 or 3 units, both semesters (STUART)

PSYCHOLOGY

FRANK ANGELL, Professor.
LILLIEN JANE MARTIN, Associate Professor.

1. **General Psychology.**—Lectures and exercises. Not open to first-year students. Students will use Titchener's Text-book of Psychology, Vol. I, as a book of reference.
4 units, 1st semester (ANGELL)

2. **Experimental Psychology.**—Lectures, one hour; laboratory, two hours. Students are recommended to take this course in connection with courses 1, 5, and 6.
3 units, both semesters (ANGELL, MARTIN)

3. **Cognition and Recognition.**—Open to those who have completed course 1, or its equivalent.
2 units, 2d semester (ANGELL)

4. **Advanced Laboratory Work in Psychology.**—
3 units, both semesters (ANGELL, MARTIN)

5. **Applied Psychology.**—With special reference to the Fine Arts.
2 or 5 units, 1st semester (MARTIN)

6. **Applied Psychology.**—With special reference to the Social Relations. 2 units, 1st semester (MARTIN)

6a. **Abnormal Psychology and Mental Hygiene.**—
2 units, 2d semester (MARTIN)

7. **Current Psychological Literature.**—In this connection a subsection for the purpose of reading German and French Psychology will be formed, if so desired.
1 unit, both semesters (ANGELL, MARTIN)

8. **Psychology of Thinking.**—
2 units, 2d semester (MARTIN)

9. **Research Work.**—
(ANGELL, MARTIN)

EDUCATION

*Ellwood Patterson Cubberley, Professor.
Percy Erwin Davidson, Rufus Clarence Bentley, Lewis Madison Terman, Assistant Professors.
†Jesse Brundage Sears, Instructor.
Morris Elmer Dailey, Lecturer.
Frances Elizabeth Short, Edward Samuel Evenden, Assistants.

The Department of Education offers three main lines of work:

1. Courses of a general nature on the history, function, and administration of public education, intended in part as information courses for the general university student and without reference to the work of teaching. To such students courses 1, 2, 3, 7, 10, and 11 are recommended.

2. Courses intended to assist other departments in preparing their students for work in secondary schools. All such students should confer with members of the Department of Education as to courses, but in general courses 1, 2, 6, and 13 are recommended if the candidate has not had experience in teaching. Course 13 will be required for the high school teacher's recommendation.

3. Courses primarily for major students, or those making Education a minor, and intended to give special preparation to (*a*) those who desire to become teachers of Education in normal schools or colleges, (*b*) those who wish to prepare for supervisory or administrative positions in the public schools, and (*c*) those who wish to prepare for special educational work in the elementary or secondary field.

The courses in Education are open to all students as electives or as minor subjects, but only those who desire to prepare for one of the lines of work mentioned above under (3), and whose preparation and experience are satisfactory to the Department, will be accepted as major students. In special cases those without teaching experience may be accepted as major students, but all such must be approved in practice teaching (course 18) before graduation.

Major students begin their work in Education with the sophomore year, taking courses 1 and 2.

I. Elementary and Introductory Courses

(*Open to teachers, and to all others except first-year students.*)

1. Public Education in America.—A study of the province and

*Absent on leave, second semester, 1910-11.
†Absent on leave, 1910-11.

some of the more important problems of public education in the United States. An introductory course. Lectures, following a syllabus, with assigned readings. 2 units, 1st semester (CUBBERLEY)

2. Educational Theory.—An introductory course dealing with topics fundamental to education, such as the nature of infancy, physical and social heredity, the relation of the organism to environment, of instinct to habit, etc. Lectures, following a syllabus, with assigned reading. 2 units, 2d semester (DAVIDSON)

II. MORE ADVANCED COURSES, BUT OF A SOMEWHAT GENERAL NATURE

(*Open to teachers, and to third- and fourth-year students. In general, courses 1 and 2 should precede these courses. Course 3 should precede or accompany course 4, and should precede course 11.*)

3. History of Education in Europe.—A study of the development of educational ideals and systems from the time of the Greeks and Hebrews to the present, with particular reference to the forces which have operated in the evolution of the various historic ideals and schools. The first semester (*3a*) covers the period up to the Reformation, and the second semester (*3b*) the period from the Reformation to the present. Either semester may be taken separately. Lectures, following a syllabus, with assigned readings.

2 units, 1st semester (CUBBERLEY)

4. Sources for the History of Education.—A more extensive and intensive study of the sources for the History of Education in Europe than is undertaken in connection with course 3. [Not given in 1910-11.] 2 units, both semesters (SEARS)

5. History of Education in America.—A more advanced course, dealing with selected problems in the history and present condition of education in the United States. [Not given in 1910-11.]

2 units, both semesters (SEARS)

6. Educational Psychology.—This course is devoted to the study of problems in experimental pedagogy, with special reference, during 1910-11, to the psychology of learning. The course presupposes some previous knowledge of general psychology. Those who have not had such preparation should take course 1 in the Department of Psychology before beginning this course.

2 units, 2d semester (TERMAN)

7. Social and Moral Education.—A study of the important facts and principles underlying social and moral education, as a basis for a

criticism of current educational practice in this country and elsewhere. The course should be preceded by elementary work in psychology or ethics. 2 units, both semesters (DAVIDSON)

8. **Logic of Education.**—A study of the significance for education of the theory of knowledge and the psychology of thinking. Herbartian "General Method" will be reviewed. Open to students who have taken elementary work in psychology or logic.

2 units, both semesters (DAVIDSON)

9. **City School Administration.**—A study of the educational, financial, and administrative principles underlying the proper administration of school systems in cities, with a view to the establishment of principles of action. 2 units, 1st semester (CUBBERLEY)

10. **State School Administration.**—A study of the educational principles underlying the proper administration of school systems in States and counties, and involving a comparative study of the school laws and school systems of the various American States. The course includes a study of such topics as Federal and State policy, forms of control, revenue and its apportionment, the State and the teacher, the State and the child, private and sectarian education, and State oversight and control. Course 10 alternates with course 9. [Not given in 1910-11.] 2 units, both semesters (CUBBERLEY)

11. **Foreign School Systems.**—A comparative study of the more important foreign state school systems, their policy of organization, ideals of work, methods of instruction, training of teachers, courses of study, statistics, and recent reforms. Different national systems will be studied each year. [Not given in 1910-11.]

3 units, 2d semester (CUBBERLEY)

III. COURSES INTENDED PRIMARILY FOR THOSE PREPARING TO TEACH IN SECONDARY SCHOOLS

(*Open to seniors and graduate students. Courses 1 and 2 should ordinarily precede these courses. Course 17 should precede course 18 by one semester.*)

13. **Secondary Education.**—A course dealing with the organization, scope, and method of public and private secondary schools in America, and including a consideration of the preparatory, cultural, commercial, technical, and industrial aspects of secondary education. Lectures, assigned readings, and reports. Intended primarily for and required of those preparing for the teacher's certificate. Open to seniors and graduates only. 3 units, 2d semester (BENTLEY)

14. Literature of Adolescent Psychology.—A critical study of the more important literature of adolescent psychology, with particular reference to those phases which are of most significance to teachers and principals in secondary schools.

2 units, 2d semester (TERMAN)

15. The Administration of a School.—A practical course, dealing with the work of teachers and principals in a high school or city school. This course will involve some visitation of high schools in the vicinity of the university. 2 units, 2d semester (BENTLEY)

16. Types of Secondary Schools.—A more advanced course than 13, and consisting of an examination of the work proposed for the various new types of high schools—polytechnic, commercial, agricultural, and industrial—and a study of such schools as found in other lands, with a view to ascertaining the possibilities of such instruction.

2 units, 2d semester (BENTLEY)

17. Method and Management of Instruction.—A practical course in class-room management and the theory of instruction. Intended as a preparatory course for those expecting to do practice teaching, and should be taken the semester preceding. Not required if course 8 has been taken. 1 unit, either semester (EVENDEN)

18. Practice in Teaching.—Actual practice in the handling of classes and the giving of instruction, with accompanying conferences, as required by the rules of the State Board of Education for a California High School Teacher's Certificate. This may be arranged for at the University, at the San Jose State Normal School, or at any other California State Normal School. Hours for teaching must be arranged in advance: (*a*) if at the University, with Mr. EVENDEN; (*b*) if at the San Jose State Normal School, with President DAILEY. Conference with all practice teachers.

4 units, either semester (EVENDEN, DAILEY)

IV. ADVANCED AND SPECIAL COURSES

(*Intended primarily for teachers of some experience, and for students making Education a major or a minor. Open to such, of junior standing or above.*)

20. Criticism and Supervision of Instruction.—A few advanced students, who have had sufficient teaching experience, will be allowed to undertake the personal investigation, in the schools of the vicinity,

of problems in instruction or supervision. Collateral reading and detailed written reports will be required. Enrollment only after conference with the instructor concerned.

1 unit, either semester

(CUBBERLEY, BENTLEY, DAVIDSON, TERMAN)

21. **School Administration Practice.**—A laboratory course in school administration practice, dealing with the office and supervisory work of superintendents of schools. Visits will be made to school systems in the vicinity of the university. [Not given in 1910-11.]

2 units, 2d semester (CUBBERLEY)

22. **Statistical Method.**—The theory of statistical work and the application of statistical method to the study of typical problems in the different fields of education. [Not given in 1910-11.]

2 units, 2d semester (CUBBERLEY)

23. **Elementary Education.**—A course dealing with the organization of elementary schools, with particular reference to the content and use of the course of study. The Kindergarten will be considered incidentally. Intended primarily for prospective supervisors of elementary education.

2 units, 1st semester (DAVIDSON)

24. **Literature of Child Psychology.**—A critical study of the more important literature bearing on child psychology, with particular reference to those phases which are of most significance to supervisors and teachers in elementary schools.

2 units, 1st semester (TERMAN)

25. **Psychology and Hygiene of Educational Method.**—A critical study of some of the more important investigations bearing on the condition, method, and results of instruction in the elementary curriculum. The course will follow different lines in different years. For 1910-11 the topic is the language group: reading, writing, spelling, and grammar.

2 units, 1st semester (TERMAN)

26. **The Curriculum.**—A discussion of the relative importance of the historical, social, and psychological factors concerned in the formulation of the school and college curriculum. Topics to be chosen. Open to supervisors, teachers, and students on consultation with the instructor. Either semester may be taken separately. [Not given in 1910-11.]

(DAVIDSON)

27. **Educational Theory, Advanced Course.**—The course deals with phases of biology and psychology more directly concerned in educa-

tion. Topic for 1910-11: Intellectual Growth. The course presupposes elementary work in psychology, bionomics, and the nervous system.
2 units, both semesters (DAVIDSON)

28. Physical Aspect of the Child.—This course will include a consideration of the following topics: the child in the light of evolution; growth in height and weight of the neuro-muscular system, and of the internal organs; the pathology of development; mortality and morbidity; degeneracy and mental deficiency; physiological aspects of sleep, work, and rest. 3 units, 1st semester (TERMAN)

29. School Hygiene.—This course will deal with the subject more from the administrative point of view, and will include such topics as the history, methods, and results of medical inspection; educational adaptations for defectives; problems of heating, lighting, and ventilation; the care of school buildings, etc.
3 units, 2d semester (TERMAN)

30. The Training of Teachers.—This course deals with the organization of normal schools and the professional preparation of teachers, and is primarily intended for those entering on the work of training and supervising teachers.
1 unit, 2d semester (DAILEY)

32. Journal Club.—Regular meetings of instructors and advanced students for the discussion of new books and current literature. [Not given in 1910-11.] 1 unit for the year (CUBBERLEY)

33. Thesis Work.—In certain courses, students may be given an additional hour of credit on presentation of a satisfactory thesis on an assigned topic embodying the results of independent work. The consent of the instructor is necessary before registering. Seniors in Education will be expected to present a thesis in some field for graduation.

34. Special Courses.—Special work in independent research may be provided for students prepared to do advanced work, the nature of the investigation being determined by the student's preparation and needs. Such work will include studies in administration, educational history, and the curriculum.
(CUBBERLEY, BENTLEY, DAVIDSON, TERMAN)

35. Seminary: History and Administration of Education.—Advanced students desiring to work on problems in the history or administration of education will register for this course. The topic for 1910-11 is the evolution and present status of education in certain type States. 2 units, 1st semester (CUBBERLEY)

Courses in Other Departments

The following special Teachers' Courses in other departments are designed for students preparing to teach these special subjects in secondary schools. Such courses are usually necessary for the departmental recommendation, but do not count again as part of the required units in Education.

a. Teachers' Course in Greek.—[See Department of Greek.]

b. Teachers' Course in Latin.—[See Department of Latin.]

c. Teachers' Course in German.—[See Department of Germanic Languages.]

d. Teachers' Course in French.—[See Department of Romanic Languages.]

e. Teachers' Course in English.—[See Department of English.]

f. Teachers' Course in History.—[See Department of History.]

g. Teachers' Course in Drawing.—[See Department of Drawing.]

h. Teachers' Course in Elementary Physics.—[See Department of Physics.]

HISTORY

Ephraim Douglass Adams, Arley Barthlow Show, Herbert Eugene Bolton, Professors.
Edward Benjamin Krehbiel, Associate Professor.
Henry Lewin Cannon, Payson Jackson Treat, Assistant Professors.
Percy Alvin Martin, Instructor.
David Starr Jordan, Lecturer.

The Teacher's Recommendation.—To obtain a Teacher's Recommendation in History the applicant must have completed, in a manner acceptable to the Department three of the courses 3, 4 (or 11), 5, and 7, one advanced course (throughout one year), and the Teachers' Course in History.

1. **Historical Training Course.**—A practical course in the finding and handling of historical material. Required of, and limited to, first-year History majors. 1 unit, both semesters (Martin)

[**History of Rome.**—See Latin 29.]

3a. **The Early Middle Ages, 476-1095.**—A general course, open

to all students who have had one year in ancient history, or a satisfactory equivalent. 3 units, 1st semester (Show)

3b. **The Later Middle Ages, 1095-1492.**—A continuation of course 3*a*. Open to all students who have had course 3*a*, or a satisfactory equivalent. 3 units, 2d semester (Show)

4a. **English History to 1485.**—General outline course, open to first-year students. 3 units, 1st semester (Cannon)

4b. **English History after 1485.**—A continuation of course 4*a*. 3 units, 2d semester (Cannon)

5a. **Modern European History, 1500-1715.**—A general outline course. Not open to first-year students. 2 units, 1st semester (Krehbiel)

5b. **Modern European History, 1715-1900.**—A continuation of course 5*a*. 2 units, 2d semester (Krehbiel)

6. **American Colonial and Revolutionary History.**—Not open to first-year students. [Not given in 1910-11.] 2 units, both semesters (———)

7. **United States History since 1815.**—Open to students who have taken courses 4*a* and 4*b*, or a satisfactory equivalent. 2 units, both semesters (Adams)

8. **The Westward Movement.**—A study of the expansion of the American people from the Atlantic seaboard to the Pacific, and of the influence of the West upon national and international affairs at the various stages of advance. Open to History majors who have had one course in history (in addition to course 1), and to all but first-year students of other departments. 3 units, both semesters (Bolton)

9a. **The Far East.**—An account of the relations between Western nations and the peoples of Eastern Asia. The history of the Portuguese, Dutch, British, and French possessions in the Far East. Not open to first-year students. 3 units, 1st semester (Treat)

9b. **The Far East.**—China, Japan, the Philippines. A continuation of course 9*a*. 3 units, 2d semester (Treat)

10. **History of France.**—General outline course, not open to first-year students. 2 units, both semesters (Martin)

11. **English Constitutional History.**—Open to students who have taken courses 4*a* and 4*b*, or a satisfactory equivalent. 2 units, both semesters (Cannon)

12. **History of Germany.**—General outline course, not open to first-year students. 3 units, both semesters (MARTIN)

13a. **The Ancient Church.**—A general course in Church History from the Apostolic Age to Gregory the Great (A. D. 1-590), with special reference to its connection with the general movements of the age. Open to all except first-year students. [Not given in 1910-11.] 2 units, 1st semester (SHOW)

13b. **The Mediaeval Church.**—A continuation of course 13*a*, to the end of the Crusades and the beginning of the church reform movement. [Not given in 1910-11.] 2 units, 2d semester (SHOW)

14a. **Empire and Papacy in the Middle Ages.**—Subject in 1910-11: The Investiture Struggle. Open to third-year students who have taken courses 3*a* and 3*b*. 2 units, 1st semester (SHOW)

14b. **Empire and Papacy in the Middle Ages.**—A continuation of course 14*a*. Subject for 1910-11: The Age of the Hohenstaufen. 2 units, 2d semester (SHOW)

15. **Europe since 1789.**—This course is intended for third- and fourth-year students. The period of the French Revolution and Napoleon serves as an introduction. The burden of the course will fall upon more recent events, and present day problems will be taken up. Prerequisite: courses 5*a* and 5*b*. 3 units, both semesters (KREHBIEL)

16. **Teachers' Course.**—Lectures, recitations, and practice covering the topics on history customarily taught in preparatory schools. 2 units, both semesters (SHOW)

17. **Current Historical Literature.**—Study of Historical Reviews, with reports. 1 unit, both semesters (CANNON)

18a. **American and English Relations During the Civil War.**—Use of British and American documentary material. Open to third-year students who have taken general courses in English and American history. The documents are selected by the instructor, and the course is intended to furnish training in the interpretation of documentary material. 3 units, 1st semester (ADAMS)

18b. **American and English Relations, 1815 to 1860.**—Search for and selection of material on some assigned topic in diplomacy, with especial reference to use of the United States documents and the British sessional papers. 3 units, 2d semester (ADAMS)

19. **The History of the Southwest.**—An account of the Spanish

régime in the southwestern portion of the United States (from Louisiana to California), the Anglo-American movement into that area, its acquisition by the United States, and its subsequent development. Emphasis will be placed upon the southwestern frontier from 1800 to 1845. Open to students who have taken one other course in American history, and to others by special permission.

2 units, both semesters (BOLTON)

20. **History of International Arbitration.**—Lectures. The course offers biological and historical evidence, bearing on the World Peace Movement. Papers and written reports by students. Not open to first- and second-year students.

2 units, 2d semester (JORDAN, KREHBIEL)

21. **Tropical Colonization in the Far East.**—A study of the present methods of the English, Dutch, French, German, and American peoples in managing tropical dependencies in the Far East. Open to students who have taken courses 9*a* and 9*b*.

2 units, 1st semester (TREAT)

22. **History of Australasia.**—An account of British colonization in Australia and New Zealand to the present time. Open to students who have taken courses 9*a* and 9*b*.

2 units, 2d semester (TREAT)

ADVANCED COURSES

Intended primarily for graduate students, but open to advanced undergraduates, with permission of their instructors.

27. **Mediaeval Institutions.**—A practical study of select documents in the field of German constitutional history. Ability to read Latin and German is required.

2 units, both semesters (SHOW)

28. **Seminary in Southwestern History.**—A study, from the sources, of a selected portion of the field described under course 19. A thesis is required of each student.

2 units, both semesters (BOLTON)

29. **Seminary in English History.**—Subject for 1910-11: The fiscal and administrative machinery of government as illustrated in the Pipe Roll of 26 Henry III. 2 units, both semesters (CANNON)

30. **The Renaissance in Italy.**—Reading ability in French and German desirable. 2 units, both semesters (MARTIN)

31. **American Diplomatic History since 1815.**—Open to students who have had course 18, and to others by special permission. Thesis required. 2 units, both semesters (ADAMS)

32. **Seminary in Modern European History.**—By appointment. 2 units, both semesters (KREHBIEL)

35. **Seminary in American-European Relations in Nineteenth Century.**—Assignment of topic to each student and thesis required. 2 units, both semesters (ADAMS)

36. **The Philippines under Spain.**—
2 units, both semesters (TREAT)

37. **Seminary in United States Constitutional History.**—[Not given in 1910-11.] 2 units, both semesters (———)

ECONOMICS AND SOCIAL SCIENCE

†ALLYN ABBOTT YOUNG, BURT ESTES HOWARD, Professors.
ALBERT CONSER WHITAKER, HARRY ALVIN MILLIS, Associate Professors.
IRA BROWN CROSS, Instructor.

The courses offered by the Department of Economics and Social Science fall into two general groups. The elementary courses (1-13) are designed for the general students as well as for those specializing in the department, and include discussions of the more important contemporary economic and social problems—the understanding of which is believed to be a condition of good citizenship. The advanced and graduate courses offer to properly prepared students opportunities for the intensive study of special problems and for training in the methods of investigation used by economic science.

While no attempt is made to offer technical training in business methods, students looking forward to a business career will find courses 1, 4, 5, 6, 8, 10, and 11 valuable as affording a survey of important business institutions and relations. An endeavor is made, however, to render some of the courses offered by the department of direct technical value to students planning to enter the government service, or to engage in the work of public or private institutions for social betterment.

1. **Elements of Economics.**—A descriptive course, constituting

†Absent on leave, 1910-11.

an introduction to the subject. Must precede all other courses in the department. Two lectures hours and one quiz hour each week.
3 units, both semesters (Cross)

4. **Money and Banking.**—Forms and laws of money; the money question. Credit and banking; the money market and foreign exchanges. 3 units, both semesters (Whitaker)

5. **Railway Transportation.**—The present American railway system, railway finance, railway statistics, theory of rates, methods of public control in Europe, Australasia, and America. [Not given in 1910-11.] 3 units, 1st semester (Young)

6. **The Corporation and Trust Problem.**—Elementary survey of corporation law; history of corporations and corporate combinations, pools and trusts, in relation to public policy; present tendencies in legislative control. 2 units, both semesters (Whitaker)

9. **Social Statistics.**—A study of the structure and movement of the population, with special reference to the methods and results of modern vital statistics. [Not given in 1910-11.]
3 units, 2d semester (Young)

10. **The Labor Problem.**—Primarily a study of trades unions, their development, organization, principles, policies, and practice.
3 units, 1st semester (Millis)

10a. **Immigration and Race Problems.**—A study of the social and economic problems resulting from the mingling of races in the United States. 3 units, 2d semester (Millis)

11. **Labor Legislation and Economic Reform.**—The growth and characteristics of labor legislation; the bearing of important legal decisions with regard to labor; discussions of wages, and of certain economic reform measures. [Not given in 1910-11.]
2 units, both semesters (————)

12. **Social Economics.**—A general survey of the leading economic, social, and individual causes of social disorder and poverty; methods and principles of modern relief policies; specific social problems; social legislation and other current movements for social betterment. [Not given in 1910-11.]
3 units, both semesters (————)

13. **Socialism.**—The history of socialism and allied social movements, together with an analysis of socialistc doctrines.
3 units, 1st semester (Cross)

14. Economic History.—The economic history of England from the Norman Conquest to the present.

3 units, 2d semester (CROSS)

15. American Methods of Taxation.—Examination of the principles of taxation, followed by an intensive study of American federal and state revenue systems. 3 units, both semesters (MILLIS)

ADVANCED AND GRADUATE COURSES

16. History of Political Economy.—A survey of the growth of economic theories and opinions in modern times, together with an inquiry into the character and methods of current economic science. [Given in 1911-12 and alternate years.]

3 units, both semesters (YOUNG)

17. Value and Income.—A study of the factors governing interest, rents, wages and profit, preceded by a review of the theory of value. 2 units, both semesters (WHITAKER)

18. Principles of Economics.—An intensive study of the fundamentals of economics, based largely on Marshall's *Principles of Economics.* 2 units, both semesters (MILLIS)

20. Seminary in Statistics.— Investigation of selected social and economic problems with special reference to the use of the statistical method. [Not given in 1910-11.]

2 units, both semesters (YOUNG)

21. Seminary in Social Economics.—Certain social institutions, relief measures, and labor problems are studied critically, the object being to familiarize the student with available materials and to acquaint him with methods of social research. [Not given in 1910-11.]

2 units, both semesters (————)

23. Economic Conference.—Bi-weekly meetings of instructors and graduate students for discussion of current economic literature and the presentation of the results of original research.

POLITICAL SCIENCE

30. Comparative Federal Government.—A comparative study of the governments of Germany, Switzerland, and the United States. Open to students who have taken History 7, History 5*b*, and History 12, or their equivalents. A reading knowledge of German is desirable but not required. 3 units, both semesters (HOWARD)

31. **American Politics.**—An inquiry into the organization and administrative functions of the government, the competence of its courts, problems touching citizenship, etc. Open to students who have taken History 7 or History 19, or an equivalent.

3 units, 1st semester (HOWARD)

32. **Municipal Government.**—Including a critical study of various municipal charters and forms of city government, together with an investigation of certain problems in municipal administration. [Not given in 1910-11.]

3 units, 2d semester (HOWARD)

33. **Parliamentary Government.**—A study of the governments of England and France. Not open to first- and second-year students.

3 units, 2d semester (HOWARD)

34. **Seminary in Political Science.**—An examination of the basal theories underlying political institutions. Open only to students who have a good knowledge of general and constitutional history, and who read German or French readily.

2 units, both semesters (HOWARD)

LAW

CHARLES HENRY HUBERICH, FREDERIC CAMPBELL WOODWARD, ARTHUR MARTIN CATHCART, WESLEY NEWCOMB HOHFELD, Professors.

CHARLES ANDREWS HUSTON, JOSEPH WALTER BINGHAM, Associate Professors.

JOHN SLATER PARTRIDGE, Lecturer.

THE LAW SCHOOL

The purpose of the Department is to provide a thorough legal education for students who are fitted by their maturity and their previous academic training to pursue professional study under university methods of instruction. The curriculum covers three academic years and constitutes an adequate preparation for the practice of law in any English speaking jurisdiction. Elective courses in Code Pleading and in California Practice are offered, and graduates of this school are admitted to the California Bar without examination. A comprehensive group of courses in Public Law, of value not only to the law student but to the student who contemplates entering the diplomatic, consular, or other government service, is a feature of the curriculum.

Only college graduates and students who have completed three years

of work in the pre-legal curriculum of this University (see below), or its equivalent, are admitted as regular students. Students in the pre-legal curriculum are permitted to count one year of law study toward the degree of Bachelor of Arts, and are thereby enabled to complete the Law School curriculum in two years after graduation. Under certain conditions, persons over twenty-one years of age who have had experience in business, or who evince uncommon ability, may be admitted as special students, not candidates for a degree.

The Library

The Law Library contains over 15,000 volumes, including complete sets of the English, Irish, Scotch, and Canadian reports, the reports of all the Federal courts, a practically complete set of the reports of the American States and of the Canadian Provinces, the National Reporter system, the standard collections of cases (including the American Decisions, American Reports, American State Reports, Lawyers' Reports Annotated, and American and English Railway Cases), a working collection of statutes, text-books, encyclopedias, digests, and other books of reference, and sets of the leading American, British, and Continental legal periodicals.

Pre-Legal Curriculum

For undergraduate students who enter with the intention of preparing for the study of law, a pre-legal curriculum is offered by the University under the direction of the Faculty of the Law School. This curriculum ordinarily occupies four years and requires that the student obtain 120 units of university credit. The equivalent of three years (90 units of credit) is given to general culture studies (for instruction in which no tuition is charged) and of one year (30 units of credit) to the professional study of law.

The 120 units of work usually are apportioned as follows: To the first and second years, 30 units of general culture studies each; to the third year, 24 units of general culture studies and 6 units in law; to the fourth year, 6 units of general culture studies and 24 units in law. The 90 units of general culture studies may be taken in three years, and the fourth year be devoted entirely to law study.

A pre-legal student is expected to take Introduction to the Study of Law in his second year, Contracts in his third year, and the remaining courses of the first year of the Law School in his fourth year.

In electing courses in general culture subjects it is expected that 54

units will be applied as follows: To English, 10, which shall include courses A and 2 (Composition), and 24 (Argumentation); to a modern language other than English, 6; to Latin or Greek, 4 (8 additional units in a modern language other than English may be substituted); to History, 15; to Economics, 13; to Mathematics, Logic, Chemistry, or Physics, 6.

Students who satisfactorily complete the pre-legal curriculum are granted the degree of Bachelor of Arts by the University, and by reason of having had one year of law study as undergraduates may satisfy the requirements for the degree of Juris Doctor by two years of graduate law study.

Admission to the Professional Curriculum

Admission to the professional curriculum in law is granted to students duly enrolled in the University, as follows:

I. To students who have received the degree of Bachelor of Arts, or an equivalent degree, from this University or some other institution of recognized collegiate rank.

II. To students who have received credit for at least seventy-five units (substantially three years) in the pre-legal curriculum offered by this University, or the substantial equivalent thereof in some other institution of recognized collegiate rank (see page 10). Students in such pre-legal curriculum, however, who have received credit for forty-five units, will be permitted to take the course in the law of Contracts.

III. In the discretion of the Faculty of Law, to students over twenty-one years of age, who cannot meet the foregoing requirements, but who have had experience in business or who evince uncommon ability. Such special law students will be afforded all the privileges of the School, and will be given a certificate in lieu of the degree awarded to regular students.

Admission to Advanced Standing in Law

By special vote of the Faculty of Law credit may be given without examination for work satisfactorily completed at other law schools, but in no case will credit be given for work not done in residence at an approved law school. Examinations for advanced standing in law, if required, may be taken in places other than at the University. Applications for such examinations should be made not later than April 1, for the May examinations, and not later than November 15, for the

December examinations. A fee of five dollars per course is charged for examinations not taken at the University.

Law School Curriculum

The work of the first year in the Law School is required, and consists of the following courses: Contracts, Criminal Law, Torts, Introduction to Property, Equity I, and Agency.

The work of the second and third years in the Law School is elective, but the following courses may not be taken ordinarily before a student has completed the work of two years in the Law School; Administrative Law, Private Corporations, Municipal Corporations, Evidence, and California Practice.

The courses offered in the Law School, roughly grouped for purposes of convenience according to the nature and analogies of the subject matter, are as follows:

A. Elementary Law.—A course designed to give to students in other departments of the University, who do not intend to practice law, a useful knowledge of some elementary legal principles and their practical application. Not open to law students or pre-legal students. Open to all other students having 25 units of credit. Text-book: Huffcut's Elements of Business Law. Lectures, recitations and assigned reading. 3 units, 1st semester

(Huberich, Woodward, Hohfeld, Bingham)

1. **Introduction to the Study of Law.**—Nature, origin, and evolution of law; sources of law; sanctions of law; legal rights and duties; classification of law; historical sketch of English and American law. The methods of legal study; the use of reports, digests, encyclopedias, and treatises; practice in the analysis of cases and in the preparation of abstracts and briefs. Open to students of any department who have 25 units of credit in the University. Selected Cases.

2 units, 2d semester (Huston)

2. **Criminal Law.**—Nature and sources of criminal law; crime as an act; attempts; criminal intent; circumstances affecting illegality of act; specific offenses; crimes against the person, larceny and allied offenses, crimes against the dwelling-house, conspiracy. Open to pre-legal students having 75 units of credit, and to all law students. Beale, Cases on Criminal Law (2d ed.).

4 units, 1st semester (Huberich)

3. **Constitutional Law.**—Nature and sources of American con-

stitutional law; adoption and amendment of constitutions; separation of powers; power of judiciary to declare acts of the legislative and executive branches of government unconstitutional; citizenship; privileges and immunities of citizenship; due process of law; police power; eminent domain; taxation; ex post facto and retroactive laws; laws impairing the obligation of contracts; regulation of commerce; money; war; government of territories. Open to second- and third-year law students and to well-prepared fourth-year students in history, economics, and political science. Thayer, Cases on Constitutional Law.

3 units, both semesters (HUBERICH)

4. **Administrative Law and Public Officers.**—Administrative regulations; jurisdiction, discretion, adjudication; enforcement of orders; habeas corpus; mandamus; certiorari; equitable jurisdiction in public law. Open to third-year law students. [Not given in 1910-11.] Freund, Cases on Administrative Law.

3 units, 1st semester (HUSTON)

5. **Municipal Corporations.**—General nature; corporate capacity; self government; creation, annexation, division, dissolution, succession; modes of action, ratification and curative acts; estoppel by recitals; municipal police power; local improvements and services, including special assessments; municipal property, especially public streets; municipal contracts; expenditure and donations; indebtedness and its constitutional limit; liability. Prerequisite: course 25. [To be given in 1912-13.] Case-book to be announced.

2 units, 2d semester (HUSTON)

6. **International Law.**—Nature and sources of international law; territorial rights of states; territorial jurisdiction; jurisdiction on high seas; nationality; belligerency; neutrality. Open to second- and third-year law students, and to well-prepared fourth-year students, in history, economics, and political science. [Not given in 1910-11.] Scott, Cases on International Law. 4 units, 2d semester (HUBERICH)

7. **Conflict of Laws.**—Nature and force of foreign law; comity; jurisdiction over persons and things; jurisdiction of courts; creation of personal rights and of rights of property; torts and contracts; enforcement of rights. Open to second- and third-year law students. [To be given in 1911-12 and in alternate years thereafter.] Beale, Cases on Conflict of Laws. 4 units, 1st semester (HUBERICH)

8. **Admiralty.**—Admiralty jurisdiction, basis; maritime contracts, torts, and crimes; maritime liens, ex contractu, ex delicto,

priorities, discharge; bottomry and respondentia obligations; salvage; general average. Open to second- and third-year law students. Ames, Cases on Admiralty. [Not given in 1910-11.]

2 units, 1st semester (HUSTON)

9. **Roman Law.**—A study of the Institutes of Gaius and Justinian and of selected titles from the Digest, Code, and Novels. A reading knowledge of Latin and of either German or French will be required. Open to second- and third-year law students. [Not to be given in 1911-12.] 2 units, both semesters (HUBERICH)

10. **Persons and Domestic Relations.**—Marriage; promise to marry; marriage contract at common law and under statutes; rights of husband and wife in each other's property; status of married women; transactions between husband and wife; torts affecting marital relations; separation; divorce. Parent and child: custody; services and earnings; torts to children; torts by children; adoption; illegitimacy. Infancy: period of infancy; voidable acts; disaffirmance, ratification; contracts for necessaries; obligations created or authorized by law; liability for tort; guardian and ward. Insanity. Drunkenness. Alienage. Open to second- and third-year law students. [To be given in 1911-12 and in alternate years thereafter.] Woodruff, Cases on Domestic Relations (2d ed.).

2 units, 1st semester (WOODWARD)

11. **Introduction to Property.**—Distinction between real and personal property; acquisition of rights in personal property; gifts: bailment; lien; pledge. Real property: tenures; estates; seisin and conveyance; Statute of Uses; incidents of ownership in real property; fixtures; easements; covenants as to use; public rights; franchises: rents. Open to pre-legal students having 75 units of credit, and to all law students. Gray, Cases on Property, Vols. I and II (2d ed.).

4 units, 1st semester; 2 units, 2d semester (WOODWARD)

12. **Title to Land.**—Accretion; title by adverse possession, prescription; methods of transfer of interests in land at common law and under statutes; creation of interests in land by agreement or conveyance; interpretation of instruments of transfer; covenants running with the land; covenants for title; execution of deeds; fraudulent conveyances; recording. Open to second- and third-year law students. [Given in 1910-11 and in alternate years thereafter.] Gray, Cases on Property, Vol. III and part of Vol. AI (2d ed.).

4 units, 1st semester (BINGHAM)

13. **Wills and Administration.**—Acquisition of property on the death of former owner, escheat, descent, occupancy, gifts mortis causa; the making, revocation, and republication of wills, probate and administration, payment of legacies and distribution, ademption and lapse of legacies. Open to second- and third-year law students. Prerequisite: course 11. [To be given in 1911-12 and in alternate years thereafter.] Gray, Cases on Property, Vol. IV (2d ed.) and selected cases.

4 units, 1st semester (BINGHAM)

15. **Future Interests.**—Vested and executory interests; construction of language creating future interests; powers; rule against perpetuities; provisions for forfeiture and restraints on alienation; the California law of future interests. Prerequisite: course 11. Open to second- and third-year law students. [To be given in 1911-12 and in alternate years thereafter.] Gray, Cases on Property, Vol. V and part of Vol. VI (2d ed.), and selected cases.

4 units, 2d semester (BINGHAM)

16. **Water Rights and Irrigation Law.**—A course in the intensive study of the law of water, with especial reference to water rights in the Western States. Open to second- and third-year law students. Selected cases and legislative enactments.

3 units, 2d semester (BINGHAM)

17. **Mining Law.**—A course on mining titles under the Federal mining acts, with especial reference to mining rights in the Western States and Alaska. Open to second- and third-year law students. [Given in 1910-11 and in alternate years thereafter.] Selected cases and legislative enactments. 2 units, 2d semester (BINGHAM)

18. **Torts.**—Trespass to person, to real property, and to personal property; excuses for trespass; conversion; legal cause; negligence; contributory and imputed negligence; plaintiff's illegal conduct as a defense; duties of land-owners; hazardous occupations; liability for animals; deceit; defamation, slander, libel, privilege, malice; malicious prosecution, criminal and civil; interference with social and business relations, inducing breaches of duty, fair and unfair competition, strikes, boycotts, business combinations. Open to pre-legal students having 75 units of credit, and to all law students. Cases on Torts: Ames, Vol. I (3d ed.); Smith, Vol. II (2d ed.).

3 units, both semesters (CATHCART)

19. **Quasi-Contracts.**—Sources, extent, and nature of the obligation; distinctions between quasi-contract and pure contract, and between

quasi-contract and tort; obligation arising from benefits conferred in the absence of contract; obligation arising from benefits conferred under a contract but without the receipt of an equivalent. Open to second- and third-year law students. [To be given in 1912-13 and in alternate years thereafter.] Woodruff, Cases on Quasi-Contracts.

3 units, 2d semester (CATHCART)

20. **Contracts.**—Offer and acceptance; consideration; contracts under seal; contracts for the benefit of third persons; assignments; joint and several contracts; the Statute of Frauds; conditions; impossibility; illegality; discharge of contracts. Open to pre-legal students having 45 units of credit, and to all law students. Williston, Cases on Contracts.

3 units, both semesters (WOODWARD)

21. **Bills and Notes.**—This course considers all types of negotiable paper, and discusses in detail the law of bills of exchange, notes, and checks, including: formal requisites; acceptance; indorsement; transfer; extinguishment; obligation of parties; diligence; specialty character; the effect of the Negotiable Instruments Law. Open to second- and third-year law students. [Given in 1910-11 and in alternate years thereafter.] Smith and Moore, Cases on Bills and Notes.

4 units, 2d semester (HUBERICH)

22. **Sales.**—Subject matter of sale; executory and executed sales; bills of lading and jus disponendi; seller's lien and right of stoppage in transitu; fraud; factors acts; warranty and remedies for breach of warranty; Statute of Frauds. Open to second- and third-year law students. [Given in 1910-11 and in alternate years thereafter.] Williston, Cases on Sales (2d ed.)

4 units, 2d semester (WOODWARD)

23. **Agency.**—Nature of relation; appointment; liabilities of principal for agent's torts, contracts, crimes; liabilities of agent; parties to writings; undisclosed principal doctrines; delegation of agency; termination; ratification. Prerequisites: first semester of courses 18 and 20. Open to pre-legal students having 75 units of credit and to all law students. Wambaugh, Cases on Agency.

4 units, 2d semester (HUSTON)

24. **Partnership.**—Nature of a partnership, its purposes, and members; creation of partnerships; nature of partner's interest; firm name and good will; mutual rights and duties of partners; actions between partners, at law and in equity; powers of partners; liability

for acts of partners in contract and tort; general liability of partners; dissolution and notice; consequences of dissolution; dissolution agreements respecting debts; distribution of assets to creditors, and between partners; limited partnerships. Open to second- and third-year students. Gilmore, Cases on Partnership.

3 units, 1st semester (HUSTON)

25. **Private Corporations.**—The nature of a corporation; the formation and organization of corporations; irregular incorporation; corporate powers; ultravires; promoters; directors; shareholders; creditors; stock, issue and payment, transfer. Open to third-year law students only. Warren, Cases on Corporations, and selected California cases.

4 units, 1st semester (HUSTON)

26. **Public Service Companies and Carriers.**—The nature, rights, and duties of public calling as exemplified by railway, telegraph, telephone, gas, water, irrigation, and other public service companies. Common carriers of goods and persons; liability; limitation of liability; bills of lading; stoppage in transitu; connecting carriers; tickets; baggage, compensation and lien. Open to second- and third-year law students. [To be given in 1911-12 and in alternate years thereafter.] Wyman, Cases on Public Service Companies (2d ed.); also selected cases on carriers.

3 units, 2d semester (CATHCART)

27. **Bankruptcy.**—Jurisdiction of the United States and the States; who may be a bankrupt; who may be petitioning creditors; acts of bankruptcy; what property passes to the trustee; provable claims; protection; exemptions and discharge. Open to second- and third-year law students. [Given in 1910-11 and in alternate years thereafter.] Lectures and assigned reading.

2 units, 1st semester (WOODWARD)

28. **Insurance.**—Marine, fire, and life insurance. Insurable interest in various kinds of policies; concealments; misrepresentations; warranties and other matters affecting the validity of the contract; amount of recovery; subrogation; waiver, estoppel, election; powers of agents; assignees and beneficiaries. Open to second- and third-year law students and to others by special permission. [To be given in 1912-13 and in alternate years thereafter.] Wambaugh, Cases on Insurance.

3 units, 1st semester (HUSTON)

29. **Suretyship.**—Personal suretyship compared with real suretyship (mortgages, pledges, liens, etc.); suretyship obligations compared with insurance and indemnity obligations; guaranty and other forms of

suretyship in relation to the Statute of Frauds; suretyship in transactions involving negotiable instruments; fidelity contracts and judicial bonds; surety's defenses due to original defects in his obligation or to its subsequent discharge; surety's right to subrogation, indemnity, contribution or exoneration; creditor's right to surety's securities. This course must ordinarily precede that on Mortgages. Open to second- and third-year law students. [To be given in 1911-12 and in alternate years thereafter.] Ames, Cases on Suretyship.

3 units, 2d semester (WOODWARD)

30. **Mortgages.**—All forms of mortgage security, both real and chattel; essential elements of legal and equitable mortgages; legal and equitable rights, powers and remedies of mortgagor and mortgagee with respect to title, dower, curtesy, possession, rents and profits, waste, collateral agreements, foreclosure, redemption; priorities; marshalling; extension of mortgages; assignment of mortgages; discharge of mortgages. This course must ordinarily be preceded by that on Suretyship. Open to second- and third-year law students. [To be given in 1913-14 and in alternate years thereafter.] Kirchwey, Cases on Mortgage. 3 units, 2d semester (HOHFELD)

31. **Equity I.**—Historical development of equity; relation between equitable rights and powers and legal rights and powers; general principles relating to jurisdiction, procedure and remedies; specific performance of contracts with special emphasis on the relations between vendors and purchasers of realty; introduction to mortgages; bills for an account; specific reparation and prevention of torts, including waste, trespass, nuisance, disturbance of easements, infringement of patents and copyrights, interference with business relations. Open to pre-legal students having 75 units of credit, and to all law students. Ames, Cases in Equity Jurisdiction, Vol. I.

4 units, 2d semester (HOHFELD)

32. **Equity II: Trusts.**—Trusts considered in comparison with other equitable and legal relations; nature and requisities of trusts with respect to consideration, subject-matter, the trustee, the *cestui que trust;* sufficiency of language in wills and deeds creating trusts; kinds of trusts; express, constructive, and resulting trusts, private and charitable trusts; transfer of the respective interests of trustee and *cestui que trust* by act of party and by marriage, death, etc.; rights and remedies of creditors of trustee and *cestui que trust;* priorities with respect to trusts and other equitable interests; resignation or

removal of trustee; duties of trustee as to general execution of the trust and as to investment of the trust funds. Open to second- and third-year law students. [Given in 1910-11 and in alternate years thereafter.] Ames, Cases on Trusts (2d ed.); also selected cases.

4 units, 1st semester (HOHFELD)

33. **Equity III.**—Interpleader; bills of peace and quia timet; cancellation of contract; clouds on title; perpetuation of testimony; rights of future enjoyment; reformation and rescission of contract; mistake, fraud, misrepresentation; duress and undue influence. Open to second- and third-year law students. [To be given in 1913-14 and in alternate years thereafter.] Ames, Cases in Equity Jurisdiction, Vol. II.

2 units, 2d semester (HOHFELD)

34. **Damages.**—Respective functions of court and jury in estimating damages; exemplary, liquidated, nominal, direct, and consequential damages; avoidable consequences; counsel fees; certainty, compensation, damages for non-pecuniary injuries; value; interest; and damages in certain actions of tort and contract. Open to second- and third-year law students. [To be given in 1911-12 and in alternate years thereafter.] Beale, Cases on Damages (2d ed.).

2 units, 2d semester (CATHCART)

35. **Pleading.**—*Part I.* A general survey of the common law, equity, and code systems of pleading, based upon lectures, assigned readings, and a study of selected forms. *Part II.* An intensive case study of the fundamental principles of pleading: the statement of a cause of action; demurrers, general and special; default; negative answers or pleas by way of traverse; affirmative answers or pleas in confession and avoidance; dilatory pleas; several pleas; replies or replications; departure; new assignment; amendment of pleadings; set-off and counterclaim; motions based on the pleadings; error and appeal on the pleadings. Open to second- and third-year law students. Ames, Cases on Pleading (2d ed.); also selected cases.

4 units, 1st semester (CATHCART)

36. **Evidence.**—Respective functions of judge and jury; "law and fact"; presumptions; burden of proof; judicial notice; classification of evidence; relevancy as primary test of admissibility; principles and rules relating to the following: misleading or unimportant matters, character, admissions, confessions, hearsay, witnesses' opinions and expert testimony, real evidence, evidence relating to execution, contents and interpretation of writings; various rules of substantive law stated

in terms of "parol evidence rule"; competency of witnesses; privilege of witnesses; impeachment and confirmation of witnesses; examination of witnesses. A few extra sessions will be held for the purpose of affording actual practice in the presentation of evidence and the examination of witnesses. Open to students having 31 units of credit toward the J. D. degree. Thayer, Cases on Evidence (2d ed.); also selected cases. 3 units, both semesters (HOHFELD)

37. **California Practice.**—Organization and jurisdiction of courts; court records and files; proceedings prior to judgment, including: service and return of summons and motions relating thereto, appearances, provisional remedies, such as attachment, arrest, etc., lis pendens, the trial, exceptions and findings, verdict; the judgment, its entry and satisfaction; proceedings subsequent to judgment, including: stay of execution, costs, execution, motion for new trial, appellate proceedings; probate and administration proceedings; special proceedings, including writs of certiorari, mandamus, and prohibition; introduction to jurisdiction and procedure of Federal courts. Prerequisite: course 35. Open to students having 43 units toward the J. D. degree. California Code of Civil Procedure; also selected California cases.
2 units, 2d semester (PARTRIDGE)

SPECIAL LECTURES

In addition to the regular professional courses, a number of special lectures, most of them of a practical character, are given each year by experienced lawyers of the California Bar.

INSTRUCTION IN PRACTICE

A special effort is made to impart to the student a thorough knowledge of the rules of procedure and practice, and to enable him to acquire a creditable degree of skill and facility in the application of such rules to conditions of actual litigation. To these ends, courses are offered in Common Law, Equity and Code Pleading, and in California Practice (see pp. 127-130). In the last-mentioned course, particularly, the student is afforded practical experience in the commencement of actions, the preparation of pleadings, the trial of issues of fact, and the argument of questions of law. Likewise, in connection with the course in Evidence, extra sessions of the class are held for the purpose of exemplifying the actual methods of introducing evidence and examining witnesses.

Moot Courts

Three law clubs—Bench and Bar, Abbott's Inn, and Arcade—have been organized by the students for the purpose of holding moot courts for the argument of questions of law. This work is voluntary, but is carried on with the advice and assistance of the Faculty. Moot courts are also conducted by the local chapters of the Phi Delta Phi and Delta Chi fraternities.

Public Speaking

Courses in the principles of vocal expression in public speaking, and in oral debate, offered by the University, may be elected by students in Law. Law students are eligible to membership in the two debating societies of the University. They may compete for the Carnot Debate medal, and for positions on the University Intercollegiate Debate team.

Admission to the Bar

It is provided by Section 280*b* of the California Code of Civil Procedure, that any person producing evidence of having satisfactorily completed the three years' course of law study prescribed by this Law School, shall be entitled to a license to practice law in all the courts of the State, subject to the right of the chief justice of the Supreme Court to order an examination, as in ordinary cases of applicants without such evidence. The certificate required by the statute will be issued, upon request, to any regular or special student who shall have received an aggregate of 75 units of credit in the Law School, including credit in Pleading and California Practice and excluding credit in the course in Introduction to the Study of Law, and who, in addition thereto, shall have received credit in the course in English Composition (English 2).

General Regulations

To receive credit in any course in the Law School, a student must obtain a minimum grade of fifty per cent in classroom work and also in the written examination held at the end of the course. His average for the two must reach sixty per cent. In estimating this average the final examination will count two-thirds and the classroom work one-third. The right to take the final examination is conditioned on regular attendance and the maintenance of the required grade for class work.

A student whose average standing is between fifty and sixty will be given a *condition* and one whose grade is below fifty will be given a

failure. A *condition* requires a re-examination and a *failure* a repetition of the entire course. No special examinations will be given to remove conditions except in the case of a student in the senior year of the pre-legal curriculum. If such student should incur a condition in one of the required law courses during the first semester of that year he may on petition be granted a re-examination at the end of the second semester, if the condition is the only obstacle in the way of his graduation. For such examination he must pay a special fee of five dollars. In all other cases examinations to remove conditions may be taken only at the regular examination period for the particular course.

No student may register for more than fifteen hours of law per week. A student may register as visitor in any course in which he is entitled to register as a regular student, provided that such registration shall not give him more than fifteen hours of law

Fees and Expenses

For professional law courses tuition fees are charged as follows: to students registering for thirteen or more units in law in any semester, twenty-five dollars per semester; to students registering for less than thirteen units in law in any semester, two dollars per unit per semester. For courses taken in the Summer Term the tuition fee is four dollars per unit.

All undergraduate students in the University are charged an incidental fee of fifteen dollars per semester; but in the case of undergraduates who are taking law courses, the incidental fee, or such portion thereof as may be required, is applied in payment of the charge for tuition.

A syllabus fee of fifty cents per semester is charged in all law courses except Pleading and California Practice. In Pleading the syllabus fee is one dollar; in California Practice, three dollars. A diploma fee of five dollars is payable before graduation.

The cost of text-books in the law courses will average twenty-five dollars per year for the three years of the professional curriculum.

GRAPHIC ART

Arthur Bridgman Clark, Associate Professor.
Robert Bartholow Harshe, Assistant Professor.
Chloe Lesley Starks, Instructor.

The Department aims to meet the needs of three classes of students: students who wish training in artistic perception and graphic expression for its general culture value; students who wish to begin professional art study while receiving other university training; and technical students to whom knowledge of representative drawing is essential.

Course 1 or its equivalent must precede all other courses excepting courses 6, 8, and 9. Technical courses may receive credit a second time when continued with sufficient skill.

For students making Graphic Art their major study the following is an average programme: Elementary Still Life (4 units), or Still Life (2 units); Landscape (3 units); Organic Form (5 units); Perspective (2 units). Total, 11 units the first year.

Design (8 units); Cast drawing or Landscape (5 units); Lectures (2 units). Total, 15 units the second year.

Life (5 units); Color (5 units); Teachers' course (3 units); Handicraft (2 units). Total, 15 units the third year.

Illustration or Landscape (10 units); Handicraft (2 units). Total, 12 units the fourth year.

The Teachers' Recommendation.—The minimum requirement for the High School recommendation in Drawing is courses 1, 2 or 4, and 7 (3 units each), also 10 and 11. Total, 18 units.

1. Elementary Drawing.—Introductory course; still-life in charcoal and color. Open to all students.

2 to 4 units, either semester (Starks)

2. Drawing of the Head.—From the cast.

3 to 5 units, either semester (Harshe)

3. Drawing of the Head.—A continuation of course 2 from life. Open to second-year students.

3 to 5 units, either semester (Harshe)

4. Color.—Still-life painting in oils or water-colors. Open to students with six units of drawing.

2 to 5 units, either semester (Harshe)

5. **Landscape.**—Chiefly outdoor work, but supplemented during the colder weather by study from photographs. The pen, charcoal, or brush are used in accordance with the capacity and needs of each student. 3 units, 1st semester (CLARK)

6. **Lectures.**—Ideals and processes in pictorial and applied art. Open to all students.

2 units, 1st semester or both semesters (CLARK)

7. **Organic Form.**—Drawing shells, leaf sprays, animal forms, and landscape with reference to decorative elements. The course is conducted primarily as a preparation for design.

3 to 5 units, 2d semester (CLARK)

8. **Scientific Perspective.**—A series of problems involving the mathematical principles of perspective, and the application of these principles to actual buildings and objects. [Course 8 is offered in alternate years; not to be given in 1911-12.]

2 units, 2d semester (CLARK)

9. **Science Drawing.**— A course designed to assist students in scientific illustration. It includes the drawing of simple scientific subjects in pen outline, line and stipple shading, wash, and line and wash. Especial attention will be paid to the needs of individual students. Open to science students on advice.

2 units, either semester (STARKS)

10. **Teachers' Course.**—For intending teachers and supervisors of drawing. Consisting of lectures upon methods and aims in school curricula and in the practical work of preparing courses of study. Open to advanced students only. [Offered in alternate years; to be given in 1911-12.] 3 units, 2d semester (HARSHE)

11. **Design.**—Exercises in the principles of abstract design, decorative design, and structural design. Application of the principles to house planning, interior household fittings, and the handicrafts generally. 3 to 5 units, both semesters (CLARK)

12. **Illustrating.**—Practice in design and appreciation of the book arts, including title-pages, book-plates, borders, announcements, head- and tail-pieces, and illustrations. Must be preceded by course 3.

2 to 3 units, both semesters (HARSHE)

13. **Handicraft.**—Exercises in textiles, wood carving, decorative metal work, pottery, etc. To follow course 11.

2 units, either semester (HARSHE)

MATHEMATICS

Robert Edgar Allardice, Rufus Lot Green, Professors.
Hans Frederick Blichfeldt, Associate Professor.

The courses in this department have been arranged to meet the wants of two classes of students—students whose major subject is Mathematics, and students who, while taking their major in some other department, desire to include some Mathematics in their course. Students in Engineering are provided for in the Department of Applied Mathematics.

For students whose major subject is Mathematics the following programme of work is recommended: In the first year, courses 3 and 4: in the second year, courses 9, and 10 or 21; in the third year, courses 11, 12, and 15; while the work during the fourth year and for graduate students may be selected from the remaining courses, and from the Department of Applied Mathematics. The advanced courses will, for the most part, be given once in two or once in three years, and it is hoped that the advanced students will thus have the opportunity of studying the more important branches of modern mathematics.

Students whose major subject is Mathematics are recommended to begin the study either of French or of German in their freshman year.

Students who desire to take one or more years of Mathematics as a part of a liberal training are recommended to begin their work in this Department with one or more of the courses 1, 2, 3, 6, and 7.

The Teacher's Recommendation.—For the High School recommendation in Mathematics the following courses are required: 1, 2, 3, 4, 9, and 10 or 6.

1. **Trigonometry.**—Elementary course, with applications involving logarithmic calculation. 2 units, 1st semester (Blichfeldt)

2. **Solid Geometry.**—Elementary course.
2 units, 2d semester (Blichfeldt)

3. **Algebra.**—Fundamental laws, degree, symmetry, indeterminate coefficients, remainder theorem, factors, complex numbers, introduction to theory of equations, progressions, permutations and combinations. Presupposes entrance credit in Elementary Algebra.
5 units, 1st semester (Green)

4. **Co-ordinate Geometry.**—An elementary course in the analytic geometry of the conic sections, including the discussion of the general equation of the second degree. Presupposes course 3.

5 units, 2d semester (GREEN)

[Students making Mathematics their major subject should take courses 3 and 4 as the first year's work, and those who have not had trigonometry should also take course 1.]

6. **Plane Geometry.**—This course includes a rapid revision of elementary geometry, together with additional theorems and references to modern theories. It is recommended to those who expect to teach mathematics, and presupposes entrance credit in plane geometry.

2 units, both semesters (ALLARDICE)

7. **General Course.**—A brief and elementary survey of the principles of algebra, trigonometry, co-ordinate geometry, and calculus. Presupposes elementary algebra and plane geometry.

3 units, both semesters (BLICHFELDT)

9. **Differential and Integral Calculus.**—Lectures on the Differential and Integral Calculus, with applications to the theory of plane curves, on the lines of Williamson's treatises.

3 units, both semesters (ALLARDICE)

10. **Advanced Co-ordinate Geometry.**—A continuation of course 4, including the elements of the Theory of Determinants.

2 units, both semesters (GREEN)

11. **Advanced Calculus.**—A continuation of course 9.

3 units, 1st semester (ALLARDICE)

12. **Theory of Functions.**—Elementary course.

3 units, 2d semester (ALLARDICE)

13. **Non-Euclidean Geometry.**—Presupposes a course in Calculus.

2 units, 2d semester (BLICHFELDT)

14. **Modern Co-ordinate Geometry.**—

3 units, 2d semester (GREEN)

15. **Differential Equations.**—

3 units, both semesters (BLICHFELDT)

16. **Theory of Functions.**—Advanced course.

3 units, both semesters (ALLARDICE)

17. **Solid Co-ordinate Geometry.**—[Not given in 1910-11.]

2 units, both semesters (ALLARDICE)

19. **Reading Course.**—In this course the students will read French and German text-books under the direction of the instructors. [Not given in 1910-11.]

2 units, both semesters (ALLARDICE, BLICHFELDT)

20. **Theory of Groups.**—

2 or 3 units, 1st semester (BLICHFELDT)

21. **Projective Geometry.**—

2 units, both semesters (ALLARDICE)

APPLIED MATHEMATICS

LEANDER MILLER HOSKINS, Professor.

HALCOTT CADWALADER MORENO, SIDNEY DEAN TOWNLEY, Associate Professors.

†WILLIAM ALBERT MANNING, ERNEST WILLIAM PONZER, Assistant Professors.

GEORGE FRANCIS MCEWEN, Instructor.

Under Applied Mathematics are included the courses in mathematics which are required of students in Engineering. The aim is to make these courses practical in the sense of furnishing thorough drill on fundamental principles and much practice in their application. Emphasis is laid upon accuracy and system in the solution of numerical problems. Students whose training in arithmetical work has been deficient, or who are otherwise inadequately prepared, or who lack aptitude for mathematical study, can not pursue these courses successfully.

Courses A and B are the equivalents of the corresponding entrance subjects (5 and 6), and are prerequisites to the regular first-year work.* Course 1 embraces the regular first-year work, and courses 2 and 3 the regular second-year work. Students deficient in the work of the first year are not admitted to second-year courses. This requirement will be strictly enforced, whether the previous work has been taken in this University or elsewhere.

A. Solid Geometry.—This presupposes plane geometry, and is not required of those having entrance credit in solid geometry (subject 5). 2 units, 1st semester (MCEWEN)

†Absent on leave, 1910-11.

B. Trigonometry.—This is equivalent to entrance subject 6, and is not open to students having entrance credit in this subject. Plane geometry is a prerequisite. 3 units, 2d semester (McEwen)

1. **First-year Mathematics.**—This course embraces (*a*) Algebra, (*b*) Trigonometry, (*c*) Coördinate Geometry, approximately equal periods being given to the three subjects. The work begins with a rapid review of Elementary Algebra, intended to test the student's familiarity with fundamental principles and operations, those showing deficient preparation not being permitted to continue. This review is followed by more advanced work in Algebra, but emphasis is laid on the thorough mastery of the ordinary rules rather than on covering a large amount of ground. In the second part of the course much attention is paid to reviewing and enforcing the fundamental principles of Plane Trigonometry, and especially to the numerical solution of triangles using both natural and logarithmic functions. In Coördinate Geometry it is aimed to familiarize the student with the method of coördinates, so that he can apply it independently to simple problems, rather than to devote much attention to a detailed study of the properties of the conic sections or other curves. The course is open to students having entrance credit in Elementary Algebra, Plane and Solid Geometry, and Plane Trigonometry.

5 units, both semesters (Ponzer, McEwen)

2. **Calculus.**—An elementary course on Differential and Integral Calculus, in which emphasis is laid on fundamental principles and simple applications.

3 units, both semesters (Moreno, Townley, Ponzer)

3. **Theoretical Mechanics.**—An elementary course, covering the fundamental principles of Statics, Kinematics, and Kinetics, restricted mainly to coplanar forces and to plane motion of particles and of rigid bodies. An elementary treatment of Graphic Statics is included. The course is designed as a preparation for the courses in Applied Mechanics taken by students of Engineering, but is open to all whose preparation includes the equivalent of course 1. Calculus must either precede this course, or be taken at the same time.

5 units, both semesters (Hoskins, Moreno, Townley)

In addition to the foregoing, which are required of all students of Engineering, the following elective courses are offered:

4. **Adjustment of Observations.**—Theory of the method of least

squares, with applications. Credit in course 2 or its equivalent is a prerequisite. [In alternate years; not given in 1910-11.]

2 units, 2d semester (TOWNLEY)

5. **General Astronomy.**—This course will consist of a general survey of the various branches of astronomy, including a study of the celestial sphere, the bodies of the solar system, comets, the fixed stars, and other heavenly bodies. The treatment will be essentially non-mathematical. 3 units, 1st semester (TOWNLEY)

5a. **Practical Astronomy.**—The theory and practice of the determination of latitude, azimuth, time, and longtitude. Intended especially to meet the requirements of students of civil engineering. Trigonometry and surveying are prerequisites.

3 units, 2d semester (TOWNLEY)

Additional courses in Practical Astronomy and in Geodesy may be arranged for students qualified to pursue them to advantage.

6. **Graduate Courses.**—Advanced courses in Theoretical Mechanics, Hydromechanics, Theory of the Potential Function, Theory of Elasticity, or other subjects, may be arranged for students having the requisite mathematical training. During 1910-11 the following were given by Professor Moreno: (1) Some applications of Fourier's Series, 2 units, both semesters; (2) Theory of the Potential Function, 2 units, both semesters.

PHYSICS

FERNANDO SANFORD, Professor.
FREDERICK JOHN ROGERS, Associate Professor.
ELMER REGINALD DREW, †JOSEPH GRANT BROWN, Assistant Professors.
PERLEY ASON ROSS, Instructor.

Courses 1, 2, 3, 4, and 5 constitute a course in General Physics, and are intended to precede the advanced courses.

1. **Dynamics.**—Including hydrostatics and pneumatics. Open only to students who have had Algebra and Plane Geometry. Required as a preparation for each of the courses following (except 6 and 7). One lecture and two laboratory periods per week.

3 units, either semester (ROGERS, ROSS)

2. **Electricity and Magnetism.**—One lecture and two or three

†Absent on leave, 1910-11.

laboratory periods per week. Prerequisite: course 1, or its equivalent.
3 or 4 units, 1st semester (DREW)

3. **Heat.**—One lecture and two laboratory periods per week. Prerequisite: course 1. 3 units, 2d semester (SANFORD)

4. **Sound.**—Including wave-motion. One lecture and two laboratory periods per week. Prerequisite: course 1, and Trigonometry. [Not given in 1910-11.] 3 units, 1st semester (BROWN)

5. **Elementary Optics.**—Three laboratory periods per week. Prerequisites: course 1, and Trigonometry.
3 units, 2d semester (SANFORD)

6. **Engineering Physics.**—Intended especially for students in Mechanical and Electrical Engineering. Three experimental lectures and recitations and one laboratory period per week. Prerequisite: entrance Physics, and course 3 in Applied Mathematics, or may be taken concurrently with Theoretical Mechanics.

a. Heat, Light, and Sound. 4 units, 1st semester (DREW)

b. Electricity and Magnetism.
4 units, 2d semester (ROGERS)

7. **Physics for Students of Biology.**—A general, non-mathematical course in Physics intended especially for students in Biological Science and students preparing for the study of Medicine. Two lectures and two laboratory periods per week throughout the year.
4 units, both semesters (SANFORD, DREW)

8. **Mechanical Measurements.**—A course in exact measurements of mass, length, time, and gravity, using balance, dividing engine, cathetometer, chronograph, etc. Two laboratory periods per week. Prerequisite: course 1. [Not given in 1910-11.]
2 units, 2d semester (BROWN)

9. **Electrical Measurements.**—Open to students who have taken course 2 or course 6*b*. 4 units, 1st semester (ROGERS)

9a. **Photometry and Illumination.**—Open to students who have completed course 9. 1 unit, 2d semester (ROGERS)

10. **Advanced Optics.**—Two laboratory periods per week. Prerequisite: course 5. 2 units, 2d semester (SANFORD)

11. **General Physics.**—Lectures. Prerequisites: courses 1, 2, 3, 4, and 5, or their equivalent. [Not given in 1910-11.]
4 units, both semesters (SANFORD)

12. **Analytic Mechanics.**—Lectures. Prerequisites: course 1 and the Differential and Integral Calculus.

4 units, 2d semester (DREW)

13. **Teachers' Course in Elementary Physics.**—Prerequisites: courses 1, 2, 3, 4, and 5, or their equivalent.

1 unit, both semesters (SANFORD)

14. **General Thermodynamics.**—Prerequisites: Calculus and course 3, or its equivalent. 3 units, 2d semester (DREW)

15. **Vibratory Motion.**—Recitations and lectures illustrated by occasional lecture experiments and a few carefully executed laboratory experiments. A knowledge of Differential and Integral Calculus is required. 3 units, 1st semester (ROGERS)

16. **The Kinetic Theory of Gases.**—Prerequisites: Calculus and course 3 or its equivalent. 2 units, 2d semester (ROGERS)

17. **History of Physics.**—Lectures and readings on the history of physical science with special reference to the development of theories. Prerequisites: courses 1, 2, 3, 4, and 5.

2 units, 2d semester (ROGERS)

18. **Electrical Theory.**—Prerequisites: course 2 or 6*b*, and Calculus. 3 units, both semesters (ROGERS, DREW)

19. **Investigation of Original Problems in the Laboratory.**—Hours to be determined in each case. (SANFORD)

20. **Physical Theory of Electricity.**—

1 unit, 2d semester (SANFORD)

The Teacher's Recommendation.—The minimum requirement is courses 1, 2, 3, 4, 5, or an equivalent, and course 13.

Laboratory Fees.—Courses 1, 2, 3, 4, 5, 7, and 8, $4 each per semester; courses 6*a* and 6*b*, $3 each, per semester; course 9, $5 per semester; course 19, $2 per unit per semester.

CHEMISTRY

JOHN MAXSON STILLMAN, LIONEL REMOND LENOX, EDWARD CURTIS FRANKLIN, STEWART WOODFORD YOUNG, Professors.
ROBERT ECKLES SWAIN, Associate Professor.
JOHN PEARCE MITCHELL, Assistant Professor.
WILLIAM HENRY SLOAN, Instructor.
THOMAS BUCK HINE, PAUL HERMAN WALDRAFF, Acting Instructors.
ALICE RUTH BERGER, GEORGE SHAMBAUGH BOHART, THOMAS MEREDITH CRAMER, ROBERT JOHN CROSS, LOUIS DUNSHEE ELLIOTT, ARTHUR HENRY MEYER, WILLIAM EDWARD PERDEW, RALPH EDWARD SANBORN. HARRY JOHNSON SEARS, Assistants.

I. LECTURE COURSES

1. General Inorganic Chemistry.—Comprising a systematic treatment of elementary principles and of the properties of the more important elements and their compounds. Open to all students. Those not having entrance credit in Chemistry will register in a three-hour section for the first semester and in laboratory course *a*1.

2 or 3 units, 1st semester; 2 units, 2d semester (MITCHELL)

2. Principles of General and Inorganic Chemistry.—Discussion of the elements of chemical theories and of important generalizations in the field of inorganic chemistry. Open to all students who have completed courses 1 and *a*11.

3 units, both semesters (STILLMAN SWAIN)

3. Organic Chemistry.—Lectures and reviews on the chemistry of carbon compounds. Open to students who have completed courses 1 and *a*. 2 units, both semesters (FRANKLIN)

[A condensed course in organic chemistry is offered for students in medicine. See Department of Medicine, Division of Chemistry, course 1.

4. Industrial Chemistry.—Lectures on fuels, water, acid and alkali manufacturing, explosives, sugar-making and refining, petroleum. Open to students who have completed courses 2 and 3; or may be taken concurrently with course 3. 2 units, both semesters (STILLMAN)

5. History of Chemistry.—Open to students who have completed courses 2 and 3. [Not given in 1910-11.]

2 units, 1st semester, in alternate years (STILLMAN)

6. Qualitative Analysis.—In connection with laboratory course *b*.

1 unit, either semester (LENOX)

7. **Advanced Organic Chemistry.**—Advanced topics in organic chemistry, including stereochemistry. Open to students who have completed courses 2 and 3.

2 units, both semesters, in alternate years (FRANKLIN)

8. **General Physical Chemistry.**—Lectures covering as far as possible the whole field of physical chemistry. Open to students who have completed courses 2 and *d* in Chemistry, courses 3 and 9 in Mathematics, and course 1 in Physics (course 2 being also recommended).

3 units, both semesters (YOUNG)

9. **Physical-Chemical Measurements.**—An informal course of lectures given as needed in connection with course *f*.

No credit (YOUNG)

10. **Applied Physical Chemistry.**—For students in Analytical Chemistry and Metallurgy. 2 units, 2d semester (YOUNG)

11. **Physiological Chemistry.**—Lectures on the chemical composition and action of the tissues and secretions of the animal body, the digestion of foods, and the elimination of waste products. Open to students who have completed course 3, and Physiology 1 or its equivalent. 3 units, 1st semester (SWAIN)

12. **Seminary in Chemistry.**—Discussion of assigned topics in theoretical and general chemistry. Open to graduate students, and to advanced undergraduates in Chemistry, with the approval of the Faculty in Chemistry. 1 unit, both semesters

II. LABORATORY COURSES

a. **General Inorganic Chemistry.**—In connection with course 1.

a 1. Illustrating fundamental laws and principles of elementary chemistry, for students who have not received entrance credit in Chemistry. 2 units, 1st semester (MITCHELL, WALDRAFF)

a 11. Inorganic preparations and general chemistry. For students who either have completed *a*1 or have received entrance credit in Chemistry. 2 units, either semester (MITCHELL, WALDRAFF)

b. **Qualitative Analysis.**—Open to students who have completed courses 1 and *a*11.

3 afternoons, either semester (LENOX, HINE)

c. **Preparation of Typical Carbon Compounds.**—Open in connection with course 3 to students who have completed course *b*.

3 afternoons, either semester (FRANKLIN)

d. Quantitative Analysis.—Training in manipulation in gravimetric and volumetric methods. Work begins either semester. Students in other departments than Chemistry may register for three afternoons if they can not arrange for four, as is recommended. Open to students who have completed courses 6 and *b*.

4 afternoons, either semester (SLOAN)

e. Mineral Analysis.—Systematic analysis of representative minerals. Open to students who have completed course *d*, and required of students whose major subject is Chemistry, unless *f* or *g* be elected instead.

4 afternoons, either semester (STILLMAN, LENOX, SLOAN)

f. Physical-Chemical Measurements.—Exercises in the practice of physical-chemical laboratory methods. Open to students who have completed or are taking course 8, and who have completed course *d*.

3 or 5 units, either semester (YOUNG)

g. Physiological Chemistry.—A laboratory course including a preliminary study of the proteins, carbohydrates, and fats, and the action of the various digestive fluids upon them, followed by a chemical examination of the bile, blood, milk, the chief tissues of the animal body, and the excretions. In connection with course 11.

3 afternoons, 1st semester (SWAIN)

h. Assaying.—Open to students who have completed course *d*.

3 afternoons, either semester (LENOX)

i. Physical-Chemical Laboratory.—A course recommended in connection with Chemistry 10. (YOUNG)

x. Advanced and Special Courses in laboratory work and research work are open to students who have completed necessary prerequisites, by arrangement with professors of the Department and with reference to the particular aims and ambitions of the students. Such advanced or special subjects are, for example: special methods in mineral analysis, iron and steel analysis; special methods in assaying; water analysis; food analysis; urine analysis; elementary organic analysis; special organic preparations; analysis of sugar, toxicology, etc.

Qualified students may also pursue investigations of problems in inorganic, organic, physical, analytical, or physiological chemistry under the direction of any professor with whom arrangement is made.

For all such advanced, special, or research work, students will register and enroll under *x*, giving name of professor under whom the work

is to be carried on, and for such number of units of credit as may be agreed upon.

Candidates for the degree of Bachelor of Arts in Chemistry may select any one of the four following curricula (A, B, C, D), the requirements of the Department being as follows:

A. General Chemistry

First Year:—Chemistry 1, *a;* Physics 1; Mathematics 3; German 1.
Second Year:—Chemistry 2, 6, *b;* Mathematics 9; German *2a.*
Third and Fourth Years:—Chemistry *d,* 3, *c,* 8, *f.*

Recommended for all who are studying the science of chemistry for its own sake or for the profession of teaching.

B. Analytical Chemistry

First Year:—Chemistry 1, *a;* Physics 1; German 1.
Second Year:—Chemistry 2, 6, *b;* Geology 1, 2; German *2a.*
Third and Fourth Years:—Chemistry *d, e, c, h,* 3, 10; Geology 5.

Particularly adapted to students who are looking forward to the career of analytical chemist and assayer.

C. Medical or Sanitary Chemistry

First Year:—Chemistry 1, *a;* Physiology 1; German 1.
Second Year:—Chemistry 2, 6, *b;* Physics 7; German *2a.*
Third and Fourth Years:—Chemistry 3, *c, d,* 11, *g.*

Particularly adapted to students who are looking forward to medical education or to sanitary chemistry.

D. Chemical Engineering

This curriculum comprises four years of the necessary five years' work leading to the advanced degree of *Engineer* in Chemical Engineering. Candidates in this course receive the degree of A. B. in Chemistry upon completion of the following requirements:

First Year:—Chemistry 1, *a;* Applied Mathematics A, B, 1; German 1.

Second Year:—Chemistry 2, 6, *b, d;* Applied Mathematics 2, 3.

Third Year:—Chemistry 3, *c;* Engineering *1a, 1b,* 2; Physics 1, 2 (or *6a* and *6b*); German *2a.*

Fourth Year:—Chemistry 4, *e* (or *h*); Mechanical Engineering 11, 13; Metallurgy 10; Engineering *3a.*

Intended particularly for students who are working toward the degree of Chemical Engineer and who desire to fit themselves for positions of responsibility in connection with the administration of industries involving chemical knowledge and skill.

Advanced Degrees

Applicants for the degree of *Master of Arts* in Chemistry will be expected to complete, in addition to the requirements for the bachelor's degree, the equivalent of thirty units' work in the University—of which approximately two-thirds must be in the Department. This work will include a thesis based on laboratory work, and Chemistry 8 and *f*, if not included in the undergraduate work.

Candidates for the advanced degree of *Engineer* in Chemical Engineering will be required to complete, in addition to the requirements for the A. B. degree specified under course D: Mechanical Engineering 14, 31 (first semester of the course), 24, 36 (3 units per week for one semester), Chemistry 8, and a thesis based on laboratory work. Electrical Engineering 1 is advised, if possible, though not required. It is estimated that these requirements may be completed in one year after the completion of the requirements under Course D.

Candidates for the degree of *Doctor of Philosophy* in Chemistry, after the completion of the equivalent of the requirements for Master of Arts or Engineer, will follow such courses as are approved by the Department faculty, subject to general University regulations.

The Teacher's Recommendation.—The minimum requirement for the high school teacher's recommendation in Chemistry is courses 1 and *a* (Elementary and General Inorganic, lectures and laboratory), the first half of course 2 (Principles of Chemistry), and either the second half of course 2, or courses 6 and *b* (Qualitative Analysis, lectures and laboratory).

Laboratory Fees.—A charge of twenty-five dollars per semester will be made to students in each laboratory course of not more than four units registration. Of this charge five dollars per semester in assaying, and ten dollars per semester in the other courses, is returnable, less bills for breakage and loss of apparatus.

BOTANY

DOUGLAS HOUGHTON CAMPBELL, †GEORGE JAMES PEIRCE, Professors.
LEONAS LANCELOT BURLINGAME, Assistant Professor.

1. **Elementary Botany.**—Study of representatives of the principal groups of plants, with lectures upon special morphology and classification. (Campbell's University Text-book of Botany.)

Short botanical excursions will be made on six Saturday mornings in each semester. Attendance on these is not required, but is desirable, and will yield an additional half credit.

3 or 3½ units, both semesters (CAMPBELL, PEIRCE, BURLINGAME)

2. **Algae.**—Lectures, reading, and laboratory work upon the special morphology and classification of the Algæ.

5 units, first semester (CAMPBELL)

3. **Archegoniatae.**—Special morphology and classification of the Archegoniatæ. Continuation of course 2.

5 units, 2d semester (CAMPBELL)

4. **Archegoniatae.**—Advanced work in special groups.

1st and 2d semesters (CAMPBELL)

5. **Physiology.**—Laboratory work, lectures, and reading on Nutrition and Respiration. (An elementary knowledge of physics and chemistry is a desirable preliminary to this course.)

3 units, 1st semester (PEIRCE)

7. **The General Physiology of Plants.**—Lectures. Open to all.

1 unit, 1st semester (PEIRCE)

9. **Physiology.**—Laboratory work, lectures, and reading on Growth, Irritability, and Reproduction. (An elementary knowledge of physics and chemistry is a desirable preliminary to this course.) [Not given in 1910-11.] 3 units, 2d semester (PEIRCE)

10. **Botanical Technique.**—Lectures and laboratory work on methods of preparation and study of plant material.

3 units, 1st semester (BURLINGAME)

11. **Cytology.**—Lectures and laboratory work on the plant cell; the bearings of cytology on evolution, plant breeding, etc. (Open only to those who have had courses 1 and 10; courses 2 and 3 are desirable preliminaries). 3 units, 2d semester (BURLINGAME)

†Absent on leave, second semester, 1910-11.

12. **Advanced Work in Morphology and Physiology.**—Intended especially for graduate students. (CAMPBELL, PEIRCE)

Course 1 must precede all other courses, except courses 7 and 8. Students making the subject a major must complete thirty-five units, including courses 1 to 3 and course 5, course 2 or course 3 in Systematic Botany, and also course 1 in Zoology, before graduation. Course 12 is intended especially for graduate students, and opportunities will be given such students for carrying on special lines of work upon original problems.

The Teacher's Recommendation.—The minimum requirement is course 1 and two additional courses.

Laboratory Fees.—Two dollars and a half for course 1; five dollars for courses 5 and 9; three dollars per semester for each of the other laboratory courses.

SYSTEMATIC BOTANY

†WILLIAM RUSSELL DUDLEY, Professor.
LEROY ABRAMS, Assistant Professor.
JAMES IRA WILLIAM MCMURPHY, Acting Instructor.

Instruction in this Department chiefly relates to the Spermaphytes, their structure, affinities, and geographic distribution. The advanced work on the Fungi will also be given under its direction. Course 1, or its equivalent, and the Algæ and Archegoniatæ in General Botany, course 1 in Zoology, and course 1 in Entomology are required of students intending to graduate with Systematic Botany as a major study. Students are strongly advised to take one or more courses in Physiology by Professor PEIRCE.

1. **Spermaphyta.**—An elementary course in the morphology, histology, and affinities of the principal orders of flowering plants represented on the Pacific Slope. The laboratory work will be supplemented during the latter part of the course by field work and classification. 3 units, both semesters (ABRAMS)

2. **Geographical Distribution and Forest Botany.**—Lectures on the orders containing trees and shrubs and on the principles of geographical distribution which they illustrate. Laboratory work, also preparation of herbarium specimens of woody plants, native and exotic. 3 units, 2d semester (ABRAMS, MCMURPHY)

3. **Fungi.**—The laboratory work (three hours) will be devoted

†Emeritus since January, 1911.

to morphology, development, and culture methods; the lectures to systematic relationships, with an account of economically important forms. 4 units, 1st semester (DUDLEY, MCMURPHY)

4. **Elementary Taxonomy.**—This course consists of field and laboratory work, with special reference to the collection and determination of flowering plants.

2 or more units, 2d semester (ABRAMS)

5. **The Compositae.**—A study of representatives of the tribes of Compositæ, with reference to the general principles of classification.

2 units, 1st semester (ABRAMS)

ADVANCED COURSES

6. **Advanced Fungi.**—The investigation of some group of fungi, which may be either a taxonomic or a biological study.

2 or more units, either semester (DUDLEY)

7. **Coniferæ.**—A study of the Coniferæ, dealing especially with the classification and distribution of the North American species and regional distribution in other parts of the world.

2 units, 1st semester (DUDLEY)

8. **Phytogeography.**—This course is intended for those students who wish to pursue further the studies undertaken in course 2. It consists of laboratory, herbarium, and field studies of the trees and shrubs, with reference to their local distribution.

2 or more units, either semester (DUDLEY, ABRAMS)

9. **Special Taxonomy.**—A critical study of some family or genus, with special reference to nomenclature and the methods of investigation. The laboratory and herbarium work will be supplemented by field work. 2 or more units, either semester (DUDLEY, ABRAMS)

10. **Graduate Work.**—This includes investigation on a special subject in the Spermaphyta or Fungi, which may be either a systematic or a biological study. It is supplemented by reading, and a study of methods in bibliography. (DUDLEY, ABRAMS)

Several carefully planned excursions in the second semester, through the plant formations in the adjacent mountains, are made the subjects of written reports by the students in course 2. Similar excursions are required in courses 1 and 3.

THE DUDLEY HERBARIUM

February 28, 1911, Professor William Russell Dudley presented his extensive private collections to the University, and as an appreciation

of this gift the University herbarium is named in his honor. In addition to the Dudley collections, the herbarium also contains, besides purchases and exchanges, considerable donations, the most important of which are the Congdon, the Rattan, and the Abrams herbaria.

Laboratory Fees.—Laboratory fees for courses 1 and 3, three dollars; for the other courses, two dollars.

Courses Leading to Forestry

No instruction in technical forestry is given in the University; but a growing demand has led the Department to lay down courses for individual students in harmony with the preparatory requirements of the best forestry schools. Systematic Botany is made the major subject, with plant physiology and advanced work in the forest botany of the Pacific-Rocky Mountain region substituted for the algæ and archigoniatæ. Collateral study in Entomology is required, together with certain courses in Zoology, Geology, Mathematics, and other departments, and a reading knowledge of French and German. At the end of four years students have the advantage of a knowledge of Western plants, plant-formations, and climatic conditions in the most important field for applied American forestry, and a better scientific basis for their technical studies than is usually possessed by those pursuing work in forestry schools.

PHYSIOLOGY AND HISTOLOGY

Oliver Peebles Jenkins, Frank Mace McFarland, Professors.
†James Rollin Slonaker, Clara S. Stoltenberg, Assistant Professors.
Frank Walter Weymouth, Acting Instructor.
[2]Jean Redman Oliver, John Floyd Pruett, Karl Ludwig Schaupp,
[2]Esther May Skolfield, Assistants.

Undergraduate Courses

1. General Anatomy and Physiology.—This course is designed to give a general view of the laws of the structure and the activity of organisms. The work will give occasion to discuss many questions of General Biology. It consists of: First, the study of the cell and its activities as shown in the unicellular organisms, in reproductive cells, and in individual cells of many tissues; second, the study of the laws and course of development resulting in higher differentiations in structure, and specializations in function, exhibited in a selected series of

†Absent on leave, second semester, 1910-11.

organisms, both animals and plants, of increasing complexity; third, the comparative study of the physiological processes of forms placed under widely different conditions. The latter part of the course is occupied with an introduction to the embryology, anatomy, and physiology of vertebrates. (One lecture and five laboratory hours per week.)

3 units, both semesters

(JENKINS, SLONAKER, WEYMOUTH, SCHAUPP)

2. **Physiology of Muscle, Blood, and Circulation.**—To be preceded by course 1. An experimental course covering the ground represented in Foster's Physiology, Part I, or Howell's Text-book on the same subjects. (One lecture and five laboratory hours per week.)

3 units, 1st semester (JENKINS, SLONAKER)

3. **Physiology of Digestion, Respiration, Elimination of Wastes, Metabolism, and Nutrition.**—Planned to follow course 2. An experimental course, with Foster's Physiology, Part II, and Howell's Text-book, as texts. (One lecture and five laboratory hours per week.)

3 units, 2d semester (JENKINS, WEYMOUTH, SCHAUPP)

4. **The Nervous System.**—A study of the structure of the central nervous system of man by means of dissections and prepared slides, supplemented by dissections of other mammalian brains Texts: Barker's Nervous System, Edinger's Nervöse Centralorgane, Johnston's Nervous System of Vertebrates, Quain's Neurology, Van Gehuchten's Système Nerveux. (One lecture and six laboratory hours per week.)

3 units, 1st semester (STOLTENBERG)

5. **Anatomy and Histology of the Sense Organs.**—Dissection and study of prepared slides. Texts: Böhm-Davidoff-Huber's Histology, Quain's Sense Organs, Stöhr's Histology. One lecture and six laboratory hours per week. 3 units, 2d semester (STOLTENBERG)

6. **Physiology of the Nervous System and Sense Organs.**—An experimental course in these subjects, requiring courses 4 and 5 as preliminary. (One lecture and five laboratory hours per week.)

3 units, 1st semester (JENKINS, WEYMOUTH)

7. **The Vertebrate Eye.**—A comparative study of the structure and physiology of the eyes of vertebrates, giving special attention to the retina. Open to advanced students. (Lecture and laboratory work, six hours per week.) [Not given in 1910-11.]

2 units, 2d semester (SLONAKER)

8. **Special Courses in Physiology.**—Advanced courses open only to those who have had courses 1, 2, 3, 4, 5, and 6. They are arranged

for the advanced study of selected subjects in physiology, or as a drill in the methods of research. The work will be planned for the individual student, the time varying with the exigencies of the case.

2 to 5 units, both semesters (JENKINS)

9. **Histology.**—The study of the structure of the cell and its general phenomena, the fundamental tissues and the outline of their development in a comparative way, occupy the first semester. In the second, the microscopic anatomy of organs, except those of the nervous system and special senses [see courses 4 and 5], is dealt with. Elementary histological technique is taught during the course. Prerequisite: course 1, or its equivalent. Physiology majors are advised to take courses 2, 3, and 9 together. (One lecture and six laboratory hours per week.) 3 units, both semesters (McFARLAND)

10. **Histogenesis.**—A course in advanced Histology for students who have completed courses 1 and 9, and in addition the first semester of Vertebrate Embryology (Zoology 10). It comprises the comparative study of the histogenesis of the fundamental vertebrate tissues and organs. (One lecture per week, minimum laboratory work six hours per week.) 3 units, 1st semester (McFARLAND)

11. **Neurocytology.**—A comparative study of the minute structure of the nerve cell and nerve fibre, the neurone theory, and the question of functional alterations of structure during normal activity and artificial stimulation. (One lecture and at least six laboratory hours per week.) Open to advanced students. [Not given in 1910-11.]

3 to 5 units, 2d semester, in alternate years (McFARLAND)

12. **Cellular Biology.**—A course in Cytology dealing with the structure and functions of the cell, with special reference to the reproductive processes in unicellular and multicellular organisms, and the theories connected therewith. Open to advanced students. (Two lectures per week, with demonstrations and laboratory work.)

3 to 5 units, 2d semester, in alternate years (McFARLAND)

13. **Special Courses in Histology.**—Advanced courses in Histology, Cytology, and Microscopic Anatomy will be arranged for individual students, with a view to giving drill in methods of research. Open only to those who have had courses 1, 5, and 9.

2 to 5 units, both semesters (McFARLAND)

14. **Journal Club.**—Students in the advanced classes will be expected to meet once a week to discuss current literature in Physiology and Histology. 1 unit, both semesters (JENKINS)

15. Research in Physiology or Histology.—By arrangement. (JENKINS, MCFARLAND, SLONAKER, STOLTENBERG)

Candidates for the Bachelor's degree who select Physiology and Histology as a major will be expected to take courses 1, 2, 3, 4, 5, 6, 9, and 14, and at least five units to be made up from the other courses offered in the Departments of Physiology or Anatomy; and in addition courses 1 and *a* in Chemistry, one year in Physics (see course 7), and the first semester in Embryology (course 10 in Zoology). Candidates for the degree of M. D. will also include Chemistry.

Laboratory Unit of Credit.—In those courses in which definite laboratory time is not fixed, three hours of laboratory work per week through one semester are taken as the equivalent of one unit of credit.

The Teacher's Recommendation.—Students who wish the Department recommendation for High School teaching in Physiology are expected to complete the first two years' work (courses 1, 2, 3, and 9).

Laboratory Fees.—Five dollars per semester for each laboratory course.

GRADUATE COURSES

The graduate work of the Department is included in the courses numbered 7, 8, 10, 11, 12, 13, 14, and 15. Undergraduate students may elect such of these courses as they are prepared to take, but credit recorded in undergraduate standing will not count toward a higher degree. The details of the work of a graduate student will be planned for each individual, and will naturally depend on the aim sought by him and upon his previous training. Candidates for the higher degrees will be expected to include in their work attendance on the Journal Club and Seminary, the selection of certain of the courses given above, and the accomplishment of some research. When it is desired to select a minor subject, the choice of such minor will be guided by the needs of the candidate. The work leading to these degrees is of such a nature as to require a reading knowledge of German and French for its accomplishment.

PREPARATION FOR THE STUDY OF MEDICINE

Students intending to enter on the study of Medicine are advised to take Physiology and Histology as a major subject, with Chemistry, Physics, Anatomy, and Hygiene among the collateral subjects. Such a curriculum gives that foundation both in scientific knowledge and in skill in experimental Physiology, and in Histological and Anatomical

technique, which will make it possible to accomplish the medical course of the best medical schools with the greatest advantage. The courses required for graduation in the Department of Physiology and Histology with the degree of A. B. include the premedical requirements and the work of the first year of the Medical Department of this University. For details of requirements for students intending to register in the Department of Medicine see the announcement of that department.

HYGIENE

†William Freeman Snow, Associate Professor.
Royce Reed Long, Assistant Professor.
Clelia Duel Mosher, Director of the Women's Gymnasium.
Harry Wilfred Maloney, Instructor.
Maud Cleveland, Ellen Grayce Davis, Maud L'anphere, William Ramsay Dows Randall, Assistants.

General Education Courses

The following courses are useful to the major students of all departments by affording them an opportunity to learn the practical application of science to the requirements of personal and public health. The regular work of the Department is given below under "Department Courses."

1. **Personal Hygiene.**—Gymnasium. Short lecture and demonstration with three exercise hours per week in the gymnasium and its open-air divisions. Open to all students. Registration may be repeated each semester, but each student must show steady progress toward his highest physical efficiency. General strength, skill, and endurance tests must be passed before work is permitted in the various team and personal contest games. A regulation gymnasium suit is required.

1 unit, each semester

(Encina Gymnasium, Long, Maloney; Roble Gymnasium, Mosher, Davis, L'anphere.)

2. **Public Health.**—Lectures and assigned references on the principles of public and industrial hygiene, and quarantine methods. One laboratory period per week, two trips to the vicinity of San Francisco harbor, where visits are made to federal and municipal health depart-

†Absent on leave, 1910-11.

ments, to various hospitals, and to vaccine and serum laboratories, and local inspection trips to water supplies, dairies, and vegetable gardens, in the vicinity of the University, are required.

2 units, either semester (LONG, RANDALL)

DEPARTMENT COURSES

3. **Industrial Hygiene.**—A study of the effects of occupation on the health of individuals employed in the representative industries, trades, and professions. Occasional lectures, reading, and individual inspection work. A number of large industrial enterprises in the vicinity of San Francisco arrange annually for class inspection trips. Not open to first-year or second-year students.

3 units, 1st semester (SNOW, RANDALL)

4. **Epidemiology.**—Each student is required to make a detailed study of a selected series of epidemics and of the vital statistics of assigned cities and States. The purpose of the course is to give practical experience in the use of epidemiological literature and methods of analysis. Open to students preparing for medicine or some phase of the public health service. Prerequisite: course 3.

3 units, 2d semester (SNOW, RANDALL)

5. **Physical Training Methods.**—Open only to specially qualified students who wish to obtain the departmental recommendation in Hygiene and Physical Training. The course covers (*a*) the technique of gymnastics, athletic sports, gymnasium and playground games, folk dancing, etc.; (*b*) physical examinations and methods of estimating strength, endurance, and adaptability to various forms of exercise; (*c*) practice in the application of the course to gymnasium instruction, athletic team coaching and training, personal contest and playground games; (*d*) personal hygiene and first aid; (*e*) a survey of the literature on physical training. Three or six hours per week. Registration may be repeated by arrangement with instructors.

1 or 2 units, each semester (LONG, MOSHER)

6a. **Hygienic Laboratory Technique.**—Training in the methods employed in Public Health Laboratories. Prerequisites: Hygiene 4, Qualitative Analysis, Bacteriology, Physiology 3. [Not given in 1910-11.]

3 units, 1st semester (SNOW)

6b. **Sanitary Survey.**—Training in the methods of field inspection and sanitary charting employed by officers of the public health service. Prerequisite: Hygiene 6*a*. [Not given in 1910-11.]

3 units, 2d semester (SNOW)

Preparation for the Teaching of Physical Training

Students desiring to teach Hygiene and Physical Training in the schools, or to supervise municipal playground work, should consult with the head of the Department about their curriculum. A Departmental Recommendation will be given to students of ability who have acquired a thorough foundation in Physiology, Hygiene, Sociology, and Education, and have completed at least six units in Hygiene 5.

Preparation for the Public Health Service

A Departmental Recommendation will be given to students desiring to qualify for the public health service as sanitary inspectors, statisticians, disinfectors, quarantine or laboratory assistants, when a sufficient amount of work has been completed to justify the recommendation.

The Department does not accept major students, but department courses have been arranged with reference to the premedical work of students who plan careers as health officers or sanitary experts.

Laboratory Fees.—$2.50 per semester for courses 1 and 5; $2 for course 2; 50 cents for courses 3 and 5; $3 for courses 6*a* and 6*b*.

ZOOLOGY

Charles Henry Gilbert, Harold Heath, George Clinton Price, Professors.

John Otterbein Snyder, Edwin Chapin Starks, Walter Kenrick Fisher, Assistant Professors.

1. **Elementary Zoology.**—A laboratory course involving the study of representatives of the principal groups of animals, accompanied by lectures on their structure and classification, and on the general laws of biology which they illustrate.

3 units, both semesters (Price)

2. **Elementary Zoology** (special).—A laboratory course for beginners designed to meet the needs of major students in Geology. A considerable number of forms in each of the principal groups will be studied, and attention will be given to the conditions under which animals live. Field trips will constitute a required part of the course.

2 units, both semesters (Fisher)

3. **The Invertebrates.**—This course, following the first year's work, is designed to give the student a broader knowledge of the morphology and relationships of the more important invertebrate groups. 3 units, both semesters (HEATH)

4. **Invertebrate Embryology.**—A study of segmentation, the formation of the germ layers, and certain phases of the later development, including the significance of larval forms and the relationships of the principal phyla. Must be preceded by courses 1 and 2.
2 units, both semesters (beginning 2d semester) (HEATH)

5. **Advanced Work on Invertebrates.**—The original investigation of problems connected with the anatomy and embryology of invertebrates. 3 to 5 units, both semesters (HEATH)

6. **Microscopical Anatomy.**—A study of the fundamental animal tissues, with drill in microscopical technique.
2 units, 1st semester (HEATH)

7. **Classification of the Invertebrates.**—A course designed to give a wider acquaintance with the larger groups of marine invertebrates. Must be preceded by either course 1 or 2.
3 units, both semesters (FISHER)

8. **Special Systematic Work on Invertebrates.**—Original investigation of problems connected with the classification of invertebrates.
2 or 3 units, both semesters (FISHER)

9. **The Vertebrates.**—A general course in the classification of vertebrate animals, with studies in their habits and the geographical distribution of species. The course will include field excursions and a study of the methods of collecting and preserving specimens. The course may be begun either semester.
2 units, both semesters (SNYDER)

10. **Comparative Anatomy of the Vertebrates.**—A more detailed examination of vertebrate morphology, including dissection of representatives of the several classes of vertebrates, with comparative studies in vertebrate osteology, the nervous and circulatory systems, etc.
3 units, both semesters (SNYDER)

11. **Vertebrate Embryology.**—First semester: development of the chick through the first three days of incubation. Second semester: the early stages in the development of the salamander and the later stages in the development of the mammal.
2 units, both semesters (PRICE)

12. **Ichthyology.**—A course of lectures and laboratory work, including an examination of the larger groups of fishes with special reference to the characters on which they are based, and including practical work in the discrimination of species.

2 units, both semesters (GILBERT, STARKS)

13. **Advanced Ichthyology.**—Special problems in the morphology and classification of fishes will be set for advanced students prepared for such work. 2 to 5 units, both semesters (GILBERT)

14. **Journal Club.**—Open to seniors and graduate students. 2 units, both semesters (GILBERT)

Major students must before graduation complete courses 1, 3, 10, 12, 14, the first semester of courses 4 and 11, one advanced course in Zoology, and course 1 in Botany.

Work for graduate and special students will be laid out in accordance with their individual needs and preferences.

The Teacher's Recommendation.—The Department recommendation for High School teaching in Zoology requires the completion of the following subjects: Elementary Zoology, 6 units; the Invertebrates, 6 units; the Vertebrates, 4 units; Comparative Anatomy of the Vertebrates, 6 units.

THE ZOOLOGICAL COLLECTIONS

The ZOOLOGICAL MUSEUM contains a very full representation of the fishes of North America, and includes among others a valuable series of the deep-water fishes of the Pacific, and large collections from the West Indies, the Hawaiian Islands, Bering Sea, Japan, the coasts of Mexico and Central America, and the Galapagos Islands. The museum contains also a large representation of the reptiles, batrachians, birds, and mammals of California and adjoining States. The collection of marine invertebrates is rich in Pacific echinoderms and crustacea, and contains a good working nucleus in the other principal groups. The series of deep-sea forms is especially valuable.

Laboratory Fees.—All laboratory courses, three dollars each per semester.

ENTOMOLOGY AND BIONOMICS

VERNON LYMAN KELLOGG, Professor.
MARY ISABEL MCCRACKEN, RENNIE WILBUR DOANE, Assistant Professors.
DAVID STARR JORDAN, Lecturer.

ENTOMOLOGY

1. Elementary Entomology.—The elementary study of insect structure, development, and classification, including practice in collecting and preserving specimens.

3 units, either semester (MCCRACKEN)

1a. Morphology and Physiology of Insects.—Continuation of the preceding course, devoted to the study of the metamorphosis, comparative morphology, and special physiology of insects.

3 units, either semester (MCCRACKEN)

2. Classification and Development of Insects.—Continuation of the preceding courses, devoted especially to a rapid study of the present-day classification into orders, families, and genera of the insect class, and to a study of the characteristics of the life history of insects of all the different orders.

2 units, both semesters, or 4 units, either semester (MCCRACKEN)

3. Economic Entomology: Forest Insects.—A study of the insect enemies of forest and shade trees. The course includes field, laboratory, and bibliographic work. Must be preceded by courses 1 and *1a*.

2 or 3 units, 1st semester (DOANE)

3a. Economic Entomology: Orchard and Garden Insects.—A study of the principal injurious and beneficial insects of the orchard and garden. Includes field, laboratory, and bibliographic work, and a weekly lecture on the history, principles, and practice of economic entomology. Must be preceded by courses 1 and *1a*.

2 or 3 units, 2d semester (DOANE)

4. Economic Entomology: Coccidae (the scale insects).—A study of the classification, general biology, and economic relations of the scale insects, with particular attention to the more important injurious ones of the Pacific Coast. Field, laboratory, and bibliographic work, with occasional lectures. Must be preceded by courses 1 and *1a*.

2 or 3 units, either semester (DOANE)

5. **Insects and Disease.**—A course on the relations of insects to the dissemination of disease in man and the domestic animals. One lecture and one or two laboratory periods a week. Open to students of some previous laboratory training in biology.

1 or 2 units, 1st semester (DOANE)

6. **General Entomology and Insect Adaptations.**—A course of lectures and demonstrations. Open to students who have had some work in Biology (Zoology, Botany, or Physiology).

2 units, 2d semester (KELLOGG)

7. **Advanced Work.**—Advanced study and investigation of the biology of insects. Laboratory and field work.

2 to 5 units, both semesters (KELLOGG)

Work for graduate and special students will be specially arranged.

Major students in Entomology must obtain before graduation twenty-four units of credit in Entomology, and credit for course 1 in Zoology, and course 1 in Botany, making thirty-six units in biological subjects.

The *Entomological Collections* contain authoritatively determined specimens, accessible for comparison, in all of the insect orders, and include many sets of specimens illustrating the development and habits of insects. There is included, also, the most important existing collection of North American Mallophaga, comprising the types of four-fifths of all the species so far described from North America and the Pacific Islands, an unusually large collection of Coccidæ (scale insects), and a valuable series of specimens from the Galapagos Islands.

BIONOMICS

8. **Organic Evolution.**—Lectures on the laws or principles of biology and the factors in organic evolution. Not open to first- and second-year students.

1 unit, both semesters (JORDAN, KELLOGG, MCCRACKEN)

Laboratory Fees.—Three dollars per semester for each laboratory course, except course 5; course 5, $1.50.

GEOLOGY AND MINING

GEOLOGY

JOHN CASPER BRANNER, JAMES PERRIN SMITH, Professors.
AUSTIN FLINT ROGERS, Associate Professor.
*JOHN ROTHWELL PEMBERTON, †EUGENE CRITTENDEN TEMPLETON, Instructors.
GEORGE ALEXANDER MACREADY, HARRY FRANK HUMPHREY, Assistants.

Students intending to make Geology their major subject should offer, as a part of their entrance preparation, solid geometry, trigonometry, physics, chemistry, zoology, and French or German, or both; otherwise the mathematics, physics, chemistry, and language must be taken in the University.

1. **Dynamic and Structural Geology.**—Lectures, with syllabus.
3 units, 1st semester (BRANNER)

1a. **Physiography.**—Lectures, with syllabus.
1 unit, 2d semester (BRANNER)

2. **Economic Geology.**—Lectures, with syallabus. Open to students who have completed course 1.
2 units, 2d semester (BRANNER, ———)

3. **Topographic Geology.**—Field and laboratory work, with the construction of geologic maps and sections. Open to students who have completed course 1 in Geology, and course 4*a* in Civil Engineering.
4 units, summer vacation (BRANNER, PEMBERTON, MACREADY)

4. **Field Geology.**—Field practice in working out geology in the field and its representation upon topographic maps and sections. Prerequisites: Geology 1, 5, and Civil Engineering 4*a*.
5 units, summer vacation
(BRANNER, PEMBERTON, MACREADY, PARSONS)

5. **Mineralogy.**—(*a*) Methods of study and the determination of minerals, including Crystallography and Blowpipe Analysis (first semester); (*b*) Study of common and important minerals (second semester). Open to students who have taken or are taking qualitative analysis. 3 units, both semesters (ROGERS, HUMPHREY)

6. **Petrography.**— (*a*) Crystal optics and study of rock-forming minerals in thin sections and hand specimens (first semester); (*b*)

*First semester, 1910-11.
†Second semester, 1910-11.

Study of principal rock types, igneous, sedimentary, and metamorphic (second semester). Open to students who have completed course 5 or equivalent. 2 units, both semesters (ROGERS)

7. **Paleontology.**— (*a*) Systematic Paleontology, or the history and character of organisms (first semester); (*b*) Historical Geology, or the history and character of geologic formations (second semester). Open to students who have completed course 1.

4 units, both semesters (SMITH)

8. **Paleontology.**—Original investigation of various problems in paleontology, especially of invertebrate morphology, and of the distribution of faunas. This course will consist entirely of private work, in field and laboratory. Open to advanced students and graduates.

2 to 5 units, both semesters (SMITH)

9. **Advanced Mineralogy.**—Properly qualified students may take up one or more of the following lines of study:

a. Crystal Morphology. Includes crystal measurement, calculation, and drawing. By arrangement.

2 or 3 units, 1st semester (ROGERS)

b. Crystal Optics. The transmission of light in crystals from both a theoretical and practical standpoint.

2 units, 2d semester (ROGERS)

c. Petrology of Igneous Rocks. A study of the broader geological and chemical features of igneous rocks.

2 units, 2d semester (ROGERS)

d. Paragenesis of Minerals. The occurrence, association, and origin of minerals. 2 units, 1st semester (ROGERS)

e. Chemical Mineralogy. Mineral or rock analysis, including preparation of material and study of some physical properties.

2 to 4 units, either semester (ROGERS)

10. **Paleontology.**—Lectures on special topics. Open to advanced students and graduates.

2 units, both semesters (SMITH)

11. **Special Courses.**—Special courses of instruction and training are laid out for advanced and special students according to the needs and qualifications of each individual. Special investigations are taken up by advanced students as rapidly as it is possible for them to undertake such work advantageously.

1 to 5 units, both semesters (BRANNER, ———)

Fees.—Course 1, $2.50; course 2, $3; course 3, $15; course 4, $20; course 5, $5 each semester.

MINING AND METALLURGY

David Morrill Folsom, Galen Howell Clevenger, Luther William Bahney, Assistant Professors.
Alvin Theodore Schwennesen, Acting Instructor.
Hayes Wilson Young, Assistant.

Students intending to make Mining and Metallurgy their major subject should offer as a part of their entrance preparation, solid geometry, trigonometry, advanced algebra, physics, chemistry, zoology, and Spanish, French, or German; otherwise the mathematics, physics, chemistry, and one language must be taken in the University.

Curriculum

The Department offers to students a five-year curriculum leading to the degree of Mining Engineer or Metallurgical Engineer.

The degree of Bachelor of Arts will be granted upon the satisfactory completion of four years of this curriculum.

Mining

The following is a general summary of the curriculum in Mining, which will be subject to adjustment in individual cases:

First Year—Applied Mathematics 1 (10 units); Engineering 1*a*, 1*b* (6 units); Chemistry 1, *a* (6 units); English A, 2 (3 units); Language—French, German, or Spanish (6 units). Total, 31 units.

[None of the first-year subjects offered in the second semester can be taken without the first semester's work. First-year students can therefore advantageously enter the course as outlined above only at the beginning of the first semester.]

Second Year—Applied Mathematics 2, 3 (16 units); Mechanical Engineering 11 (2 units); Chemistry 6, *b*, *d* (8 units); Geology 5 (6 units); English 2*b* (2 units). Total, 34 units.

Third Year—Engineering 2, 3*a* (8 units); Civil Engineering 4*a* (5 units); Chemistry *h* (3 units); Mechanical Engineering 1*a*, 1*b* (3 units); Geology 1, 2, 6 (9 units); Mining 8 (4 units). Total, 32 units.

Fourth Year—Mechanical Engineering 24, 31 (6 units); Law A (3 units); Geology 3, 4, 7*b* (13 units); Mining 1, 2, 9, 10, *a* (13 units); Electrical Engineering 1 (4 units).

Geology 3 and 4 (9 units) are given during the summer vacation, between the third and fourth years.

Total of fourth year, 39 units.

In the fourth year Mining *b* (3 units), or Civil Engineering 8*c* (3 units) may be substituted for Mechanical Engineering 24.

FIFTH YEAR—For the degree of Mining Engineer: Mechanical Engineering 35, 36 (6 units); Mining 3, 4, 5, 6, 7, 11, 14 (26 units). Total, 32 units.

COURSES IN MINING

1. **General Lectures on Mining.**—Including methods of earth and rock excavation, prospecting, tunneling, shaft sinking, and mining methods. 3 units, both semesters (FOLSOM, SCHWENNESEN)

2. **Ore Dressing.**—Lectures on crushing and concentrating machinery and methods.

2 units, 1st semester (CLEVENGER, FOLSOM)

3. **Summer Mining.**—Two months' systematic work in the mines. Between fourth and fifth years. 4 units

*4. **Lectures on Mine Plant.**—Including hoisting machinery, compressors, mine pumps, ventilating fans, and the handling of ore underground and on the surface.

3 units, both semesters (FOLSOM)

*5. **Ore Dressing.**—Continuation of course 2. Theories of concentration and comparison of milling practice in different parts of the United States. 2 units, 1st semester (FOLSOM)

*6. **Mine Engineering.**—Lectures on general engineering problems in connection with mining operations, including administration, organization, mine examinations, accounting, surveying, etc.

2 units, 2d semester (FOLSOM)

7. **Mine Thesis.**—Each student describes and estimates the cost of the development and equipment of an hypothetical mining property under conditions which are assigned so as to fit the experience he has gained in his summer work.

5 units, both semesters (FOLSOM, SCHWENNESEN)

METALLURGY

Students working for the degree of Metallurgical Engineer will be required to take the same work for the first three years as the Mining Engineers.

*Fifth-year work. Not given in 1910-11.

In the fourth and fifth years the following courses must be substituted for engineering courses: Chemistry 2, 8, *e* (16 units).

A thesis on a metallurgical subject and advanced laboratory work will also be required in the fifth year.

The following four-year curriculum is offered for the degree of Bachelor of Arts:

First Year—Applied Mathematics 1 (10 units); Engineering 1*a*, 1*b* (2 units); Mechanical Engineering 11 (3 units); Chemistry 1, *a* (6 units); English A, 2*a* (3 units); Language—French, German, or Spanish (6 units). Total 30 units.

Second Year—Chemistry 2, 6, *b*, *d* (14 units); Geology 5 (6 units); Civil Engineering 4*a* (5 units); English 2*b* (2 units); Optional (3 units). Total 30 units.

Third Year—Chemistry *c*, *h* (7 units); Geology 1, 2, 6 (9 units); Mining 2 (2 units); Mechanical Engineering 1*a*, 1*b*, 24, 31 (9 units); Optional (3 units). Total 30 units.

Fourth Year—Law A (3 units); Electrical Engineering 1 (4 units); Mining 1, 8, 9, 10, 11, 12, 14 (21 units). A short thesis will also be required for graduation, making a total for the year of 30 units.

Courses in Metallurgy

igneous metallurgy

8. General Metallurgy.—Lectures upon the principles of metallurgy, fundamental chemical reactions, fuel, heat, refractory materials, etc. *Metallurgy of Copper and Lead.*—Lectures upon processes of lead and copper smelting, electrolytic copper refining, refining of base bullion, parting and electrolytic refining of Doré bullion. This course also deals with the metallurgy of gold and silver in so far as their metallurgy is inseparable from that of copper and lead. Open to students who have completed Chemistry 1, and prerequisite of all laboratory courses in Metallurgy.

4 units, 2d semester (Clevenger, Bahney)

9. Metallurgy of Constructive Materials.—Lectures upon the manufacture and properties of iron and steel, and to a less extent the other alloys used in engineering. Bearing metals, bronzes, brasses, etc. Laboratory work in this course is given in connection with Engineering 2*b* (Mechanics of Materials). Open to students who have completed Chemistry 1.

2 units, 1st semester (Clevenger)

HYDRO METALLURGY

10. **Metallurgy of Gold and Silver.**—Lectures upon the Cyanide Process of gold and silver extraction. The older and now almost obsolete processes of chlorination, hyposulphite lixiviation, patio and pan amalgamation, etc., are dealt with very briefly. Open to students who have completed Chemistry 1 and 10, and prerequisite of laboratory course *b*. 2 units, 1st semester (CLEVENGER)

a. **General Metallurgy Laboratory.**—A course of carefully selected experiments which illustrate the lectures in Metallurgy 8. Open to students who have completed Chemistry *h*, and course 8; in special cases may be taken at the same time as Metallurgy 8.

2 units, 2d semester (BAHNEY)

b. **Metallurgy of Gold and Silver Laboratory.**—This course involves the laboratory examination and report upon the possible treatment of gold and silver ore by the cyanide process. Open to students who have completed Chemistry *d* and *h*, and Metallurgy 10.

3 to 5 units, either semester (BAHNEY)

c. **Metallography.**—Conferences, reading, and laboratory work. Metallography by Ruer-Mathewson is used as a text. Frequent reference is made to the Metallographist and other standard works. Includes the study of micro-structure and cooling curves. Open to students who have completed Chemistry 10 and *i*, Mineralogy 5*a* and 5*b*, Petrography 6*a* and 6*b*.

3 to 5 units, either semester (CLEVENGER)

d. **Metallurgical Research.**—Properly qualified students may take up any subject of metallurgical investigation in laboratory and under proper restrictions, certain investigations may be carried on in the field, also work in bibliography.

Any number of units, either semester (CLEVENGER)

Fees.—Courses 1 and 8, $7.50 each; courses 2, 9 and 10, $5 each; courses *a* and *b*, $10 per unit each; course *c*, $5 per unit; course *d*, according to amount of work done.

ENGINEERING

A. Entrance Subjects

Students must present among their entrance subjects solid geometry and trigonometry, in order to take the first year's work in applied mathematics for engineers. Those who fail to do this will not be able to graduate in less than five years.

B. General Courses

I. APPLIED MATHEMATICS

First-year Courses:—Algebra; Trigonometry; Coordinate Geometry.

Second-year Courses:—Calculus; Theoretical Mechanics. (See announcement of Department of Applied Mathematics, p. 127.)

II. GENERAL TECHNICAL COURSES

1a. Linear Drawing and Lettering.—(Drafting two afternoons a week, September and October.) Open to all students, and required of students in Engineering. The instruments and materials for this course cost from twenty to thirty dollars.

1 unit, either semester (Foss)

1b. Descriptive Geometry.—Including applications to shades, shadows, and perspective. (Two afternoons of drafting each week, November and December. Two lectures and two afternoons of drafting each week, January to May.) This course is open to students who have completed or who are taking Solid Geometry and Engineering 1*a*, and is required of students in Engineering.

1 unit, 1st semester; 4 units, 2d semester (Foss)

2. Applied Mechanics:—

a. Mechanics of Materials.—Under this head are treated the theory of the strength and elastic properties of the ordinary materials of engineering construction. The main subjects covered are simple tension, compression, and shear; theory of flexure, with applications to simple and continuous beams; theory of long columns; torsion; repeated stress; sudden stress and resilience. (Lectures and recitations three hours a week.)

b. Testing of Materials.—Each student is required to make a series of experiments, testing the strength and elastic properties of wrought iron, cast iron, steel, and wood. A careful record of all experiments is required of every student. (Laboratory work, six hours a week.)

Open to students who have completed the first- and second-year courses for Engineering students in Applied Mathematics; required of all students having Engineering as a major subject.

5 units, 1st semester (Wing, Moser)

3. **Hydraulics:—**

a. Hydrostatics and Hydraulics.—This course treats of fluid pressure, the principles of fluid equilibrium, and the laws governing the flow of water through orifices, over weirs, in closed conduits, and in open channels. Open to students who have completed courses 2 and 3 in Applied Mathematics. 3 units, 2d semester (Hoskins)

b. Hydraulic Motors.—A discussion of the theory of the main types of turbines, including centrifugal pumps. A few lectures on the general theory of energy and on relative motion are given as an introduction to the course. Open to students who have completed course 3*a*.

3 units, 1st semester (Hoskins)

I. CIVIL ENGINEERING

Charles David Marx, Charles Benjamin Wing, Leander Miller Hoskins, John Charles Lounsbury Fish, Professors.
John Harrison Foss, Charles Moser, Instructors.

A. Topographic Engineering

4a. Elementary Surveying.—Lectures: systems of co-ordinates. measurements, choice of systems, errors, checks, surveys, latitude and azimuth. Field work: experimental exercises, surveys. Drafting-room: computing, mapping. (Lectures two hours, field work and drafting nine hours, each week.) Open to students who have completed Engineering 1*a* and Applied Mathematics 1. Required of students in Civil and Mining Engineering.

5 units, either semester (Fish)

4b. Elementary Surveying.—For students in Mechanical and Electrical Engineering. (Field work, reading, and drafting, six hours each week.) 2 units, 1st semester (Fish)

B. Railroad Engineering

6a. Railroad Surveying.—Lectures: circular curves, spirals and turnouts; reconnaissance, preliminary, location, and construction surveys; earthwork. Field and office: exercises in laying out curves and taking cross-sections for topography and earthwork, and in plotting them; preliminary survey with profile and topographic map; paper location with profile and quantities; staking out paper location; earthwork and drainage surveys; final location profile and map; earthwork computations; distribution of material with use of mass diagram; overhaul computation; estimate of cost. (Recitations two hours, drafting and field work nine hours, each week.) Open to students who have completed *4a*. Required of students in Civil Engineering.

5 units, 2d semester (Fish)

6b. Railroad Location.—Interest problems, sinking fund, present value of cost of maintenance and of renewal, capitalization, comparison of structures on basis of cost. Locomotive tractive force and resistances thereto, velocity profile, momentum grade. Traction problems involving inter-relation of train weight, grade, speed, and characteristics of locomotive. Tonnage rating. Value of change in distance, curvature, rise and fall, and ruling grade, based on an analysis of operating expenses. Pusher grades, balanced grades for unequal traffic and for adjacent divisions. Study of papers describing the application of economic theory to actual cases. Open to students who have completed *6a*. 2 units, 1st semester (Fish)

6c. Railroad Construction.—Nature and requirements, methods of construction, organization of engineer corps; collection and record of information upon which to base designs and plans; designs; plans; staking out the work; inspection; classification, monthly estimates; records, reports and accounts; checks and controls. (Individual work on assigned problems three, six, or nine hours each week; lectures given during the drafting periods.) Open to students who have completed *6a* and who have taken or are taking *8b*.

1, 2, or 3 units, 2d semester (Fish)

C. Structural Engineering

8a. Elements of Design:—

1. *Materials.*—[See course 10 in Mining and Metallurgy.]

2. *Mechanics of Structures.*—Course 3 in Applied Mathematics is extended to the analytical and graphical determination of stresses in

simple trusses. (Drafting-room, nine hours a week first half of semester.)

3. *Theory of Structural Details.*—Section 2 above is extended to an investigation of the distribution of stresses in structural details. (Drafting nine hours a week, last half of semester.)

Open to students who have completed course 1 in Engineering, and who have taken or are taking course 2 in Engineering, and also course 11*c* in Geology and Mining. Required of all students having Civil Engineering as a major subject. 3 units, 1st semester (Foss)

8b. Elements of Design:—

1. *Materials.*—Structural materials, other than metals, are studied from an engineering standpoint. Wood, stone, brick, limes, cement, etc., are considered in order. (Lectures three hours a week first half of semester.)

2. *Foundations.*—Under this head are considered the bearing power of soils, strength of piles, distribution of pressures, and similar details connected with the design of simple foundations. (Lectures and assigned reading three hours a week last half of semester.)

3. *Design.*—Complete designs are made, including working drawings, bill of materials, and estimate of cost, of some simple structure, such as a mill building or highway structure. (Drafting-room, nine hours a week first half of semester; six hours a week last half of semester.)

4. *Testing.*—Extending the work of course 2*b*. Each student is required to make a series of experiments, testing the physical properties of cement and other masonry materials. (Laboratory, three hours a week last half of semester.)

Open to students who have completed course 8*a* in Civil Engineering; required of all students having Civil Engineering as a major subject.

5 units, 2d semester (Wing, Moser)

8c. Elements of Design.— Courses 8*a* and 8*b* abridged to meet the requirements of students having Mining, Mechanical, or Electrical Engineering as a major subject. Special applications are made to hoisting and conveying structures, mill buildings, and central station buildings.

Open to students who have completed courses 1 and 2 in Engineering and course 10 in Mining and Metallurgy.

3 units, 2d semester (Wing)

9. Railway Bridges.—This course comprises the determination of the stresses in modern types of railroad bridges, including cantilever

and swing spans, masonry arches, and arch ribs; the discussion of the most economical types, spans, and dimensions of bridges and bridge members; the study of the methods of constructing sub-aqueous foundations, shop methods, erection, inspection of material, specifications, and other factors influencing the design of bridges. Designs are made by each student to fulfill actual conditions, the parts proportioned, and bills of material prepared. Open to students who have completed course 8. (Lectures two hours per week, drafting nine hours.)

5 units, both semesters (WING)

D. Hydraulic Engineering

12. **Water-Supply Engineering for Towns and Districts.**—Sources of supply. Collecting and storing of water, either for water supply of towns or for irrigation purposes. Settling, filtering, conducting, and delivering of water, including the study and design of all accessory works. (Three hours lectures and recitations, six hours drafting.) Open to students who have completed courses 2 and 3 in Engineering and *4a* and *8a* in Civil Engineering; required of all students who take their major in Hydraulic Engineering.

5 units, 1st semester (MARX)

13. **Sanitary Engineering.**—Including sewerage of towns and drainage of lands. Special attention will be given to the study of all municipal sanitary problems, such as removal of sewage, destruction of garbage, construction, maintenance, sweeping, and repairs of streets and pavements. (Three hours lectures and recitations, six hours drafting.) Open to students who have completed courses 2 and 3 in Engineering and *4a*, *8a*, and 12 in Civil Engineering; required of all students who take their major in Hydraulic Engineering.

5 units, 2d semester (MARX)

15. **Construction of Canals, River and Harbor Improvements.**—Lectures and designing as per arrangement. Open to students who have completed courses *2a*, *2b*, and 3 in Engineering and *4a* and *8a* in Civil Engineering. 2 units, both semesters (MARX)

16. **Technical Seminary.**—Study of German and French technical journals. Open only to fourth-year students in Civil Engineering.

2 units, both semesters (MARX)

II. MECHANICAL ENGINEERING

William Frederick Durand, Guido Hugo Marx, Professors.
William Rankine Eckart, Associate Professor.
Everett Parker Lesley, Assistant Professor.
Lawrence Edminster Cutter, Charles Norman Cross, Frank Oakes Ellenwood, Edward John Stanley, James Bennett Liggett, Theron James Palmateer, Robert Henry Harcourt, Instructors.

For students entered subsequent to August, 1910, the following courses constitute a five years curriculum leading to the degree of Mechanical Engineer. Students successfully completing the first four years of this curriculum will be granted the degree of Bachelor of Arts.

[Numbers following subjects indicate number of units credit for the year.]

First Year—Applied Mathematics (10); Freehand Drawing (2); Chemistry (9); Shop Work (6); French or German (6).

Second Year—Applied Mathematics (6); Mechanics (10); Linear Drawing and Descriptive Geometry (6); Physics (8); Shop Work (2).

Third Year—Applied Mechanics (5); Hydraulics (3); Machine Drawing (2 or 3); Elementary Machine Design (5); Technical English Composition (2); Surveying (2); Metallurgy (3); Physics (2); Electrical Engineering (2); Shop Work (3).

Fourth Year—Heat Engines (6); Machine Design (8); Experimental Engineering (6); Economics (3); Hydraulic Motors (1); Electrical Engineering (6); Shop Work (6).

Fifth Year—Thermodynamics (1); Advanced Design (3 plus 3 elective); Experimental Engineering (3); Business and Contract Law (3); Shop Administration (3); Power Plants (4); Pumping Machinery (2); Seminary (elective) (4); Thesis (8).

The above represents the requirement for the student entering regularly with minimum mathematics and no advanced credit. For such student, in addition to the above curriculum, there should be a maximum possible elective among other subjects in other departments of the University of nineteen hours. For students who may bring advanced credit in drawing, shop work, chemistry and other subjects, the amount of possible elective may be considerably increased.

1-8. Shop Work:—

1a. Forge Practice.—(2 exercises a week, half year.)

1b. Lecture in Forge Work.—

3a. Foundry Practice.—(2 exercises a week, half year.)

3b. Lecture in Foundry Work.—

5. Woodworking.—(2 exercises a week, half year.)

6a. Pattern Shop Practice.—(2 exercises a week, half year.)

6b. Lecture in Pattern Shop Work.—

7a. Elementary Machine Shop Practice.—(2 hours a week, half year.)

7b. Lecture in Machine Shop Work.—

8. Advanced Machine Shop Practice.—(3 hours a week, half year.)

Courses 1-8 are open to all students, and required of students in Mechanical Engineering. 2 or 3 units, each semester

(LESLEY, STANLEY, LIGGETT, PALMATEER, HARCOURT)

9. Shop Administration.—A course of lectures on workshop organization and administration, factory accounting, wage systems, selection of machinery, factory methods, etc. Prerequisites: courses 1 to 7 inclusive. 1 unit, 2d semester (LESLEY)

11. Elementary Machine Drawing.—Practice in making free-hand sketches of machine parts from which working drawings, tracings, and blueprints are developed. (Six or nine hours a week in drafting-room.) Prerequisite: course *1a* in Engineering.

2 or 3 units, either semester (CUTTER)

13. Elementary Machine Design:—

a. Function of machines; motion, force, and work in machines; valve gears. (Three hours a week lectures and recitations, second semester.)

b. Drafting course applying the principles treated in *a.* (Six hours a week drafting, second semester.)

Prerequisites: course 11 in Mechanical Engineering and course *1b* in Engineering. Courses *a* and *b* must be taken together and are required of students in Mechanical Engineering.

5 units, 2d semester (G. H. MARX)

14. Machine Design.—Study of machine details, such as fastenings (including bolts and screws, riveted joints and boiler design, keys, fits and fitting); axles, shafts, and spindles; journals, boxes, and lubrication; ball and roller bearings; sliding surfaces; couplings and clutches; gear, belt, rope, and chain transmission systems; flywheels; springs; frames, and supports; etc. (Two hours a week recitation and lectures.

six hours in the drafting-room, throughout the year.) Open to students who have completed course 13 in Mechanical Engineering, and who are taking course 2 in Engineering; required of students in Mechanical Engineering. 4 units, both semesters (G. H. Marx)

15. **Machine Design.**—An abridged treatment of the field covered in courses 13 and 14. (Three hours a week recitations and lectures, six hours a week in the drafting-room, first semester.) Open to students who have completed Engineering 1*b*, Mechanical Engineering 11, and are taking Engineering 2. Intended for Engineering students whose major subject is not Mechanical Engineering.

5 units, 1st semester (G. H. Marx)

16. **Advanced Machine Design.**—Design of complete machines. Students may elect machine tools, cranes, steam or gas engines, or special problems. (One lecture and six hours drafting per week.) Intended for fourth-year students who have completed courses 14, 31, 33. 3 units, both semesters (G. H. Marx, Cutter)

21-25. Experimental Engineering.—

21. Calibration and Use of Engineering Apparatus and Instruments, including gages, thermometers, planimeters, indicators, dynamometers, meters, steam calorimeters, fuel calorimeters, and the testing of lubricating oils. (One lecture and six hours in the laboratory per week.) Open to students who have completed course 31. Required of third-year students in Mechanical Engineering.

3 units, 2d semester (Eckart, Cross, Ellenwood)

22. Testing of Steam Engines and Boilers, including determination of engine clearance; valve setting; mechanical efficiency, economy and complete tests of simple and compound engines, steam turbines, gas engines; tests for speed regulation, and the testing of boilers. (One lecture and six hours in the laboratory per week.) Open to students who have completed course 21. Required of fourth-year students in Mechanical Engineering.

3 units, 1st semester (Eckart, Cross, Ellenwood)

23. Testing of Pumping Machinery and Power Plant Auxiliaries, including steam and centrifugal pumps, hot-air pumping engines, injectors, heaters and economizers, blowers, condensers, refrigerating machinery, and a complete power-plant test. (One lecture and six hours laboratory per week.) Open to students who have completed courses 21 and 22. Required of fourth-year students in Mechanical Engineering. 3 units, 2d semester (Eckart, Cross, Ellenwood)

24. An Abridged Course in Experimental Engineering, intended for Civil Engineering, Geology and Mining, and Chemical Engineering students. Includes the calibration of apparatus, testing of steam and gas engines, steam turbines, boilers, pumps, and water wheels. (One lecture and six hours in the laboratory per week.) Open to students who have completed course 31.

3 units, either semester (ECKART, CROSS, ELLENWOOD)

25. An Advanced Course in the Investigation of Engineering Problems. Open to all students who have completed courses 21, 22, and 23.

1 to 5 units, both semesters (ECKART, CROSS, ELLENWOOD)

31. Heat Engines.—Mechanical theory of heat and its applications. (Two lectures and three hours' office work per week.) Required of third-year students in Mechanical Engineering.

3 units, 1st semester (DURAND)

33. Heat Engines.— Continuation and application of course 31. (Two lectures and three hours' office work per week.) Required of third-year students in Mechanical Engineering. Lecture and office work as for 31. 3 units, 2d semester (DURAND)

34. Thermodynamics.—A course in theoretical thermodynamics, with special reference to heat engines, and intended to supplement course 6, which is a prerequisite. Required of fourth-year students in Mechanical Engineering. 1 unit, 2d semester (DURAND)

35. The Mechanical Engineering of Central Power Stations.— Lectures. Prerequisite: course 31.

2 units, 1st semester (DURAND)

36. Pumping Machinery.—A lecture course for fourth-year students. Prerequisite: course 31, first semester.

2 units, 2d semester (DURAND)

37. Seminary.—A weekly conference for the discussion of current engineering literature and of special topics. Open to fourth-year students only. 1 unit, both semesters (DURAND)

Laboratory Fees.—Courses 1*a*, 3*a*, 7*a*, four dollars per credit hour; courses 5, 6*a*, three dollars per credit hour; course 8, two dollars per credit hour; courses 21, 22, 23, 24, six dollars; course 25, three dollars per credit hour.

III. ELECTRICAL ENGINEERING

HARRIS JOSEPH RYAN, Professor.
SAMUEL BARCLAY CHARTERS, JR., WILLIAM ARTHUR HILLEBRAND, Assistant Professors.

The following courses of instruction are given. Those required for the undergraduate degree with Electrical Engineering as a major subject are so specified; in addition the work required for this major includes the following courses in other departments:

Applied Mathematics A, B, 1, 2, 3; Engineering 1*a*, 1*b*, 2*a*, 2*b*, 3*a*; Civil Engineering 4*b*; Mechanical Engineering 1*a*, 1*b*, 3*a*, 3*b*, 5, 6*a*, 6*b*, 7*a*, 7*b*, 11, 13*a*, 13*b*, 21, 22, 31, 33, 35; Physics 6*a*, 6*b*, 9, and photometry and illumination (one unit); Chemistry 1 and *a*.

Students entering with advanced credit may also elect such other work as time and preparation permit.

A, B. Survey of Electrical Industries.—Advisory instruction to acquaint the underclassman with his duties as an electrical engineering student. For first-year students, A; for second-year students, B.

1 unit, each semester (RYAN, CHARTERS, HILLEBRAND)

1. Elements of Electrical Engineering.—An abridged course in the industrial applications of electricity, intended for non-electrical engineering students. Two laboratory lectures, one recitation, and one three-hour computing period per week. Prerequisites: courses 1, 2, and 3, in Applied Mathematics, and entrance Physics.

4 units, 1st semester (CHARTERS, HILLEBRAND)

2. Electrical Energy.—Required of third-year students in Electrical Engineering. Class and laboratory instruction in the technology of magnetic, electric, and electrostatic phenomena, electrical machinery and auxiliaries in continuous and alternating curent working. Second semester prerequisites: Applied Mathematics A, B, 1, 2, 3; Engineering 1*a*, 1*b*, 2*a*, 2*b*; Mechanical Engineering 11, 13*a*, 13*b*; Physics 6*a*, 6*b*, 9; Electrical Engineering 2*a* (first semester).

a. Recitations and Experimental Demonstrations.

1 unit, 1st semester; 4 units, 2d semester (HILLEBRAND)

b. Laboratory Work.

4 units, 2d semester (CHARTERS, HILLEBRAND)

[Course 2 is supplemented by Physics 9, laboratory work in electrical measurements (4 units, 1st semester).]

3. Electrical Engineering.—Required of fourth-year students in Electrical Engineering. Lectures, laboratory, and class work, elements of design to be elected in a particular speciality. Prerequisites: Electrical Engineering, *2a*, *2b*; Engineering, *3a*; Mechanical Engineering, 21, 31, 33. 8 units, 1st semester; 7 units, 2d semester (RYAN, CHARTERS, HILLEBRAND)

a. Lectures:

a1. General Practice: (1) Standarization Authorized by the A. I. E. E. (2) Fire Hazard, National Electrical Code. (3) Transmission Economics. (4) Standard Machinery, Auxiliaries and Structural Supplies. (5) Municipal Distribution of Electricity for Miscellaneous Service. (6) Long distance transmission of power for general purposes. (7) Discussion of typical installations. (8) Elements of finance controlling the uses of electricity. (9) Survey of electrical industries. (10) Historical and biographical sketches; Proceedings of the American Institute of Electrical Engineers.

4 lectures, 1st semester; 2 lectures, 2d semester (RYAN)

a2. Electric Railways. 2 lectures; 2d semester (CHARTERS)

a3. Transmission of Intelligence.

2 lectures, 2d semester (HILLEBRAND)

b1. Laboratory Work.—Characteristic performance of standard machinery and auxiliary apparatus; engineering tests of magnetic materials, conductors, and insulations; illumination tests of arc and incandescent lamps; tests of machinery and auxiliaries for capacity, acceptance, and technical data. 4 units, 1st semester (CHARTERS)

b2. Recitations, supplementing *b1*.

3 units, 1st semester (HILLEBRAND)

c. Applications.—Drill work, use of professional literature, and problems assigned in one of the following elective specialities:

c1. Elementary designs of power plants and systems of distribution; studies of corresponding practice as reported in literature and by visits to neighboring plants. (RYAN)

c2. Design studies in electric railway practice. (CHARTERS)

c3. Design studies in intelligence transmission. (HILLEBRAND)

Students in Electrical Engineering are not permitted to register for particular sections only in courses 2 and 3. The work in all sections of either course must be concurrent. A student who fails to do satis-

factory work in these courses as a whole may be required to repeat all sections of a corresponding course, concurrently.

10. Graduate Work.—

a. Advanced study and investigation as assigned to meet the needs of the individual.

b. Preparation of reports based upon results obtained in graduate work and their presentation to the Stanford Branch of the American Institute of Electrical Engineers.

c. Preparation of thesis required for the degree of Engineer in electrical engineering. (RYAN, CHARTERS, HILLEBRAND)

FIVE-YEAR COURSE

Those who have a decided ability for analysis, technical study, and investigation can profit by an extra year in the University. Students of this class may extend their studies through five years by one of two plans, as follows:

1. By completing the regular four-year curriculum in electrical engineering, receiving the degree of Bachelor of Arts, and by applying an additional year to graduate work elected to meet the requirements of the individual, the regulations of the University, and the approval of the major professor, receiving the degree of Engineer.

2. By the pursuit of a five-year curriculum that includes the regular four-year curriculum in electrical engineering and other studies so selected, correlated, and scheduled as to meet the needs of the particular individual and the approval of the major professor. At the completion of this course the University will grant the degree of Bachelor of Arts, and the department will certify the character of the work taken.

The Stanford Branch of the American Institute of Electrical Engineers is an organization authorized by the Institute and maintained by the members of the senior class for the discussion of the Transactions of the Institute, and of other topics as assigned, and the review of current electrical literature.

Students registering in electrical engineering for the first time should secure at the major professor's office a schedule of required studies that must be followed so that the course may be completed in four years, or in four years less the time gained by advanced standing allowed.

Laboratory Fees.—Two dollars per unit of university credit.

Syllabus Fees.—Applicable to syllabus, lantern slides, and charts. One dollar per course-section.

MEDICINE

Professors:—Adolph Barkan (Structure and Diseases of Eye, Ear, and Larynx), Henry Gibbons (Obstetrics), Joseph Oakland Hirschfelder (Clinical Medicine), Stanley Stillman and Emmet Rixford (Surgery), William Ophuls (Pathology), Ray Lyman Wilbur (Medicine), Oliver Peebles Jenkins (Physiology), John Maxson Stillman (Chemistry), Arthur William Meyer (Human Anatomy), Frank Mace McFarland (Histology), George Clinton Price (Zoology), Albert Cornelius Crawford (Pharmacology), Hans Zinsser (Bacteriology).

Clinical Professor:—William Fitch Cheney (Medicine.)

Associate Professors:—†William Freeman Snow (Hygiene), Robert Eckles Swain (Chemistry).

Assistant Professors:—James Rollin Slonaker and Clara S. Stoltenberg (Physiology), Frank Ellsworth Blaisdell (Applied Anatomy), Ernest Charles Dickson (Pathology).

Instructor:—Ruskin M. Lhamon (Anatomy).

Admission to the Department of Medicine

Three years of collegiate work in Stanford University (approximately ninety unit hours), or its equivalent as accepted by the Committee on Advanced Standing, is required for admission to the Department of Medicine. This preparatory training must include one year of Physics with laboratory work, one year of Chemistry with laboratory work including Qualitative Analysis, one year of Physiology or Biology with laboratory work, and French or German (such a reading knowledge as shall be acceptable to the Department of Medicine). Students who can do so are advised to elect work in psychology and comparative anatomy in addition, and to obtain a good reading knowledge of both French and German.

Candidates who are deficient in any of these specified subjects may be admitted only when they can satisfy the Committee on Academic Matters of their ability to make good this deficiency in connection with the regular work of the curriculum.

The State Law governing the practice of Medicine in California prescribes that every person before practicing Medicine or Surgery must

†Absent on leave, 1910-11.

produce satisfactory testimonials of good moral character and a diploma issued by some legally chartered medical school, the requirements of which shall have been at the time of granting such diploma in no particular less than those prescribed by the Association of American Medical Colleges for that year. At the present time the Association of American Medical Colleges prescribes that every medical student must be registered in a medical college or department for four years and that his preparatory course shall have included two years of Latin, or four years of German or French, two years of Mathematics, two years of English, one year of History, two years of laboratory science, and six years of further credits in languages, literature, history, or science.

Students in any department of the University who desire, after three years, to enter upon the study of Medicine, and who have included in their course of study the subjects required for admission to the Medical Department, may, at the beginning of their fourth (or senior) year in the University, register as students of Medicine, and on completion of the first year's work in Medicine may receive the degree of Bachelor of Arts. Prospective students of medicine will note that Curriculum C in Medical and Sanitary Chemistry, in the Department of Chemistry, includes all the entrance requirements; and that, with the exception of French and German, the major requirements of the Department of Physiology and Histology cover these and also the first year in Medicine.

Men and women are admitted to the Department of Medicine on equal terms.

Candidates for the degree of Doctor of Medicine must be enrolled as students in the Department of Medicine, and must pay the fees for each of the four years of the course.

Students will be admitted to advanced standing in the department only when they have completed one year or more in a medical school of recognized standing and have satisfied the other requirements for entrance to the department.

Students of Stanford University entering the Medical Department at the beginning of their fourth or senior year at the University may retain their registration as major students of other departments as candidates for the Bachelor's degree, but they must also enroll as students of the Department of Medicine and pay the fees therein in order that their senior year may count as part of the four years' curriculum in Medicine required by the law of the State and by the University.

The Curriculum in Medicine

The required period of study for the degree of Doctor of Medicine is four years (eight semesters). The work of the first three semesters is given at Stanford University and is devoted to anatomy, bacteriology, chemistry, embryology, histology, neurology, pharmacology, and physiology. The work of the last five semesters will be given in San Francisco and will be devoted mainly to work in the pathological and clinical laboratories and in the hospital wards and the dispensary.

Buildings and Equipment

The buildings in San Francisco occupy four fifty-vara lots bounded by Clay, Sacramento, and Webster streets, and consist of Cooper College, containing the laboratories, lecture and clinic rooms, and Lane Hall; Lane Hospital, a modern building in brick and stone, with a capacity of one hundred and fifty beds; and the Nurses' Home. A library building will be erected as soon as the money devised for this purpose by Dr. and Mrs. Lane becomes available.

Library Facilities

The Lane Medical Library, founded by the Directors of Cooper College, as provided in the will of Mrs. Levi Cooper Lane, is housed in Cooper College building, San Francisco. It contains about 35,000 volumes, including complete sets of many of the more important medical and biological periodicals.

Clinical Opportunities

At the City and County Hospital in San Francisco the College controls one hundred beds, averaging about a thousand patients per year. The hospital facilities will be greatly improved with the erection of the new City and County Hospital, which the City of San Francisco is building at an expense of two million dollars. It is expected that the hospital will be completed in 1913.

Lane Hospital was designed as a teaching hospital. It has now a number of teaching beds, which it plans to increase in the near future. The College Dispensary averages about seven thousand new patients per year.

Hospital Interneships

Interneships are available for graduates in Medicine in the City and County Hospital, Lane Hospital, and other hospitals in the City and State.

The Lane Lectures

The Lane Medical Lectures, founded in 1896 by Dr. Levi Cooper Lane, have furnished to students and the public an annual course of ten lectures on medical subjects by well known medical men from various parts of the world.

Fees

The tuition fees of the Medical Department are $150 per annum, payable in installments of $75 each semester; $5 per semester for the first four semesters, covering charges for anatomical material; and such other deposits to cover breakage or loss of apparatus or materials as may be required in any department or division, these deposits being returnable, less charges for breakage, loss, or wear and tear of apparatus or materials used. The total deposits for this purpose may vary from $10 to $20 per annum.

Requirements for Graduation

The candidate for the degree of Doctor of Medicine must, according to the laws of the State, have attained the age of twenty-one years, and have attended a medical college of recognized standing for four years. He must further have fulfilled the entrance requirements of the Medical Department of Stanford University before enrolling as a medical student. He must have satisfactorily completed the required curriculum, passed all examinations, paid in full the required fees, and have spent the last of the four years in medicine at this University.

COURSES OF INSTRUCTION, FIRST AND SECOND YEARS

I. Division of Anatomy

HUMAN ANATOMY

1. **Osteology.**—Students will be expected to familiarize themselves thoroughly on their own initative with the surface anatomy of bones of the skeleton. This laboratory work will be supplemented by recitations and lectures dealing with the internal architecture, the development, growth, and regeneration of typical bones, their nutrition and innervation, the mechanics of the skeleton as a whole, and the changes it undergoes from birth to old age.

2 to 3 units, 1st semester (Meyer, Lhamon)

2-3-4. Dissection of (2) the Head, Neck, and Thorax; (3) the Upper Extremity; (4) the Abdomen and Lower Extremity.—These courses are given simultaneously throughout the year and can be begun at any time. No one will be assigned to less than one of the above parts nor will credit be given for less, save by special arrangement. 2 to 5 or more units (MEYER, LHAMON)

5. Topographical and General Applied Anatomy.—In this course special emphasis will be laid upon the laboratory study of frozen sections made in all planes, and special preparations of various regions and structures. Particular attention will be given to surface landmarks, palpable structures, segmental distribution of nerves, modifications of the vascular and lymphatic systems, to terminal and collateral circulation, epiphyseal relations, the sympathetic system in its relation to referred pain, etc., the deep fasciæ and their relation to effusions, contractures, etc., and to the practical aspects of anatomy as related to medicine, surgery, and the various specialties. Fourth semester, in San Francisco. (BLAISDELL)

6. Surgical Applied Anatomy (not Operative Surgery).—A course of laboratory work, recitations and lectures. Fourth semester, in San Francisco. (BLAISDELL)

7. Topographical Anatomy.—Optional and Advanced Courses. The work will consist of laboratory study of frozen sections of the cadaver, made in various planes and of dissected and specially injected preparations. It is suggested that students who can afford the time supplement courses 2, 3, and 4 by the respective portions of course 7 immediately on completing the dissection of a part. Open to students who have completed courses 1, 2, 3, and 4. Third semester, by arrangement. (LHAMON)

8. The Anatomy of the Central Nervous System.—This course will consist of a laboratory study of the gross and microscopic anatomy of the adult human brain and spinal cord, with such references to embryology and comparative anatomy as will be found advisable. Open to a limited number of physicians and others by special arrangement. Twice or thrice weekly for several months in the first semester. (BLAISDELL)

9. Developmental Anomalies.—It is not the aim to exploit the rare and bizarre in this course. Until work in human embryology can be offered, however, an opportunity will here be given medical students to obtain some conception, even if necessarily inadequate, of the origin

of such errors and defects in development as are most likely to come to the attention of the practicing physician. Third semester. Once a week. Elective. (MEYER)

10. **The Evolution of Body Form.**—A course of lectures and recitations intended for students who desire to familiarize themselves with the development of body form, its modification by age, sex, occupation, race, etc. Embryology and physical anthropology will be generously drawn upon and the deviation of the artistic ideal from the anatomical form indicated. Offered in 1913, by special arrangement only. Elective. (MEYER)

11. **Human Embryology.**—This course will be offered as soon as adequate provision can be made. Elective.

12. **Conferences on Assigned Topics.**—One hour a week per group will be devoted to a discussion of various anatomical problems and obscure relations by those who are dissecting or have dissected a given part. Second semester. Elective. (MEYER)

The facilities of the laboratory are always at the disposal of properly qualified students or physicians who desire to undertake the investigation of some problem in gross or microscopic anatomy or in embryology.

Embryology.—Development of the chick through the first three days of incubation. [Course 11 in the Department of Zoology.]
2 units, 1st semester (PRICE)

Deposit Fees.—A deposit of $10, to cover damage to or loss of bones, is required of all students in Anatomy. This sum, less charges for damage or loss, is returnable at the close of the year. Students who desire to obtain their instruments at the storeroom must make a deposit of $5. Such part of this as is not drawn against will be refunded at the close of the year. Students of anatomy who are not medical students are required to make a deposit of $10 for each part assigned them.

II. DIVISION OF BACTERIOLOGY

1. **General Bacteriology.**—A pracical laboratory course in which students become familiar with the preparation of media, general bacteriological technique, and study the pathogenic bacteria culturally. This course lays special stress on the relationship of bacteria to disease and problems of infection. Three laboratory periods and one lecture a week.
4 units, 3d semester (ZINSSER, SPOONER)

2. Immunity.—Lectures covering the problems relating to immunity against infectious diseases, and serum therapy. Demonstrations of serum technique. Three lectures weekly, third semester. This course is coördinated with course 1 and may be taken in conjunction with it. (ZINSSER)

3. Bacteriology in Relation to Public Health.—General bacteriological technique; bacteriology of soil, air, water, and milk. This course lays special stress on problems of hygienic interest; laboratory exercises on the examination of water, soil, and milk. One lecture and two laboratory periods. Elective. 3 units (ZINSSER, SPOONER)

4. Conferences on Recent Problems in Immunity.—Once a week in the form of a seminar. Open only to students who have taken courses 1 and 2. 1 unit. (ZINSSER)

Properly qualified students or physicians may be admitted to the laboratory for special work.

Fees—Students who are not medical students will be charged a laboratory fee of $10 per course, and will be required to make a deposit of $5 for breakage—returnable at the completion of course in proportion to apparatus returned.

III. DIVISION OF CHEMISTRY

1. Organic Chemistry.—A lecture course embracing a study of the classification, structural formulæ, and properties of the more important compounds of carbon. The chemical relationships of the larger groups of organic compounds, alcohols, aldehydes, and ketones, acids, amines, and the halogen, sulphur, and nitrogen compounds will be emphasized, special attention being given throughout the course to those compounds which are of physiological and pathological interest. 3 units, 2d semester (SWAIN)

2. Toxicology.—A laboratory course, accompanied by informal lectures, dealing with the more important poisons, their physiological action and the prominent reactions employed in their identification. A search for the common poisons, based on a systematic scheme of analysis, will be made on artificially prepared materials. Students who have had no previous training in quantitative analysis will be given a preliminary course in volumetric and gravimetric analysis. 3 afternoons, 2d semester. Optional. (SWAIN)

3. Physiological Chemistry.—A laboratory course including a preliminary study of the proteins, carbohydrates, and fats, and the

action of the various digestive fluids upon them, followed by a chemical examination of the bile, blood, milk, the chief tissues of the animal body, and the excretions. 3 afternoons, 3d semester (SWAIN)

4. **Physiological Chemistry.**—Lectures on the chemical composition and action of the tissues and secretions of the animal body, the digestion of foods and the elimination of waste products.
3 units, 3d semester (SWAIN)

[Students enrolled as Medical students will be required to deposit $10 breakage fee for the laboratory courses in Toxicology and Physiological Chemistry. Other University students will pay the usual fee of $25.]

IV. DIVISION OF MEDICINE

SUBDIVISIONS

PEDIATRICS	ELECTROTHERAPHY
NEUROLOGY	TROPICAL MEDICINE
PSYCHIATRY	DIETETICS

The instruction in Medicine begins in San Francisco with the fourth semester, with practical work in Physical Diagnosis and lectures and demonstrations in Physical Therapeutics. From the fifth to the eighth semester inclusive, the general field of Medicine will be covered by means of clinics, practical demonstrations, bedside instruction, and clinical laboratory work. As far as feasible didactic and theoretical teaching will be made secondary to demonstrations and individual work on the part of the student.

1. **Physical Diagnosis and Introduction to Medicine.**—This course lays the foundation for the work in Medicine of the third and fourth years, and consists largely of practical instruction in connection with the dispensary, in the methods of physical diagnosis and in history taking. 3 units, 4th semester (WILBUR)

2. **Physical Therapeutics.**—In this course is given a practical discussion with demonstrations, of various methods aside from drugs, for the treatment of disease, with particular reference to the physiological problems involved. Hydrotherapy, Balneotherapy, Climatology, Electrotherapy, Gymnastics, and Massage are particularly considered.
2 units, 4th semester (———)

VI. Division of Pathology

1. General Pathology.—A course of lectures, recitations, and demonstrations which, following a general introduction into the field of Pathology, covers the relation of the general properties of living protoplasm and of the body cells to pathological conditions, heredity in disease, disturbances in circulation, regressive and progressive tissue changes, inflammation and tumors.

3 units, 4th semester (Ophüls, Dickson)

2. Pathological Histology.—A laboratory course in which the student studies the microscopic lesions in pathological conditions of various organs with demonstration of gross specimens.

3 units, 4th semester (Ophüls, Dickson)

VII. Division of Pharmacology

1. Pharmacology and Materia Medica.—In the course in Pharmacology especial emphasis is placed on laboratory work. This occupies six hours weekly during the first semester. In this course the student performs for himself, or has demonstrated to him by the other members of the class, not only the important experiments which illustrate the fundamental principles of pharmacology, but sees one or more experiments on all of the more important drugs. This serves to vitalize the work and render the details less burdensome. The relation of the laboratory work to rational therapeutics is constantly kept in mind. The lecture course embraces two hours weekly during the first and second semesters, with one weekly conference during the second semester. (Crawford)

2. Graduate Course.—The laboratory is open throughout the year to properly qualified students who wish to carry on independent work in pharmacology.

VIII. Division of Physiology

1. Physiology of Muscle, Blood, and Circulation.—An experimental course covering the ground represented in Foster's Physiology, Part I, or Howell's Text-book on the same subjects. (One lecture and five laboratory hours per week.) [Course 2 in the Department of Physiology and Histology.]

3 units, 1st semester (Jenkins, Slonaker)

2. Physiology of Digestion, Respiration, Elimination of Wastes, Metabolism, and Nutrition.—Follows course 1. An experimental course, with Foster's Physiology, Part II, and Howell's Text-book, as texts. (One lecture and five laboratory hours per week.) [Course 3 in the Department of Physiology and Histology.]

3 units, 2d semester (JENKINS, SLONAKER)

3. Structure of the Nervous System.—The course consists of the dissection and comparative study of a series of vertebrate brains, including the human brain and cord, also the peripheral nervous system; abundant material is provided, also such necessary helps as the latest models and charts. For texts the student will use Quain, Edinger, and Barker. (One lecture and five laboratory hours per week.)

3 units, 2d semester (STOLTENBERG)

4. Anatomy and Histology of the Sense Organs.—The course is planned to accompany course 3, the two being designed to give the gross and minute anatomy of the central nervous systems and sense organs. The texts necessary for the student's use are Quain and Barker. (One lecture and five laboratory hours per week.)

3 units, 1st semester (STOLTENBERG)

5. Histology.—The study of the structure of the cell and its general phenomena, the fundamental tissues and the outline of their development in a comparative way, occupy the first semester. In the second, the microscopic anatomy of organs, except those of the nervous system and special senses [see courses 3 and 4], is dealt with. Elementary histological technique is taught during the course. (One lecture and six laboratory hours per week.) [Course 9 in the Department of Physiology and Histology.]

3 units, 1st and 2d semesters (MCFARLAND)

6. Physiology of the Nervous System and Sense Organs.—An experimental course in these subjects, designed to follow courses 3 and 4. Texts: Foster, Howell's Text-book. (One lecture and five laboratory hours per week.) [Course 6 in the Department of Physiology and Histology.] 3 units, 3d semester (JENKINS)

7. Journal Club.—Students in the advanced classes will be expected to meet once a week to discuss current literature in Physiology and Histology. [Course 15 in the Department of Physiology and Histology.] 1 unit, 3d semester (JENKINS)

IX. Division of Surgery

SUBDIVISIONS

OPHTHALMOLOGY	URINARY DISEASES
OTOLOGY, RHINOLOGY, AND LARYNGOLOGY	DERMATOLOGY
GYNECOLOGY	RADIOGRAPHY

Instruction in Surgery begins in the fourth semester, with recitations and demonstrations in General Surgery, *i. e.*, the principles of surgery, surgical pathology, and the surgical diseases, together with recitations and demonstrations in fractures, dislocations, and deformities—subjects for which the student, having completed his anatomy, is properly prepared. The systematic text-book and lecture work in Regional Surgery is completed in the fifth and sixth semesters. The work of the seventh and eighth semesters is entirely clinical. The general field will be covered by means of clinics, practical demonstrations, bedside instruction, and work in the Surgical Pathological Laboratory.

1. **Fractures, Dislocations, and Deformities.**—Recitations, demonstrations, study of X-ray plates, and experimental fractures and dislocations in the surgical laboratory.

2 units, 4th semester (Rixford)

2. **General Surgery** (Surgical Pathology and Principles of Surgery).—Recitations, demonstrations, laboratory work utilizing clinical material in College Dispensary and Lane Hospital.

2 units, 4th semester (———)

THE CURRICULUM

The curriculum outlined below has been provisionally adopted for the four years' work in Medicine, following three years of collegiate work which must include the prescribed pre-Medical studies (see page 179).

First Semester	Lec. hours	Lab. hours	Units of credit
Neurology—Gross and minute anatomy of the Brain and Spinal Cord	1	6	3
Histology	1	6	3
Gross Anatomy	1	10	4–7
Physiology—Muscle, nerve, circulation	1	5	3
Embryology		6	2
	4	33	15

Second Semester	Actual Time (in hours) Lec.	Lab.	Units of credit
Neurology	1	6	3
Histology	1	6	3
Gross Anatomy	3	16	5–8
Physiology—Digestion, respiration, nutrition, metabolism, etc.	1	5	3
Organic Chemistry	3		3
Toxicology (optional)		[9]	[3]
	9	33	17

Third Semester (First Semester of Second Year)

Bacteriology	1	6	3–6
Gross Anatomy	1	7	3–5
Pharmacology	2	3	4
Physiological Chemistry	3	9	3
Physiology — Nervous system, sense organs, etc.	1	5	3
	8	30	16

Fourth Semester (Second Semester of Second Year)

	Hours per week
Topographical and Applied Anatomy	9
Medicine (Physical Diagnosis, etc.)	3
Surgery (Fractures, etc.)	4
General Pathology (Lectures and Discussions)	5
Pathological Histology (Laboratory)	7½
Pharmacology and Materia Medica	3
Physical Therapeutics	2
	33½

Fifth and Sixth Semesters (First and Second Semesters of Third Year)

Medicine (Lectures and Clinics)	9
Surgery (Lectures and Clinics)	8
Special Pathology	2
Clinical Pathology (Laboratory)	4
Gynecology	1
Genito-Urinary Diseases	1

Pediatrics	2
Ophthalmology	1
Obstetrics	2
Surgical Pathology	4
	34

Seventh Semester (First Semester of Fourth Year)

Medicine (Clinic)	2
Medicine (Section work)	3
Surgery (Clinic)	2
Surgery (Section work)	3
Obstetrics (Practical)	1
Ophthalmology, etc.	2
Genito-Urinary Diseases	1
Gynecology	1
Dermatology	1
Hygiene (Lectures)	1
Psychiatry (Lectures)	1
History of Medicine (Lectures or Discussions)	1
Neurology	1
Pediatrics	1
	21

Eighth Semester (Second Semester of Fourth Year)

Medicine (Clinic)	2
Medicine (Section work)	3
Surgery (Clinic)	2
Surgery (Section work)	3
Obstetrics (Practical)	1
Ophthalmology, etc.	2
Genito-Urinary Diseases	1
Gynecology	1
Dermatology	1
Hygiene and Sanitation (Lectures)	1
Legal Medicine (Lectures)	1
History of Medicine (Lectures or Discussions)	1
Neurology	1
Pediatrics	1
	21

MARINE BIOLOGICAL LABORATORY

Professors Charles Henry Gilbert and Oliver Peebles Jenkins, Directors.

Professor Frank Mace McFarland, Assistant Professor Leonas Lance Burlingame, and Acting Instructor Frank Walter Weymouth.

The Laboratory buildings are located at Pacific Grove, two miles west of Monterey, and stand on a low bluff immediately facing the sea. They consist of two two-story structures capable of accommodating about eighty students, and contain four general laboratories, one lecture-room, seventeen private rooms for special investigators, and a dark-room for photography. They are provided with aquaria, running water, and all necessary facilities for biological study. The library and apparatus of the University are available for use in the Laboratory.

Session of 1910.

The Nineteenth Session began Wednesday, June 1st, and extended over a period of six weeks, closing Tuesday, July 12th. The laboratory was under the general supervision of Professor McFarland.

Courses of Instruction

1. **General Zoology.**—An elementary course open to all students and to teachers and others who desire an acquaintance with the anatomy and life-history of marine animals and with the methods pursued in laboratory study. (McFarland)

2. **Zoology.**—Open to students who have had course 1 in Zoology or Physiology, or an equivalent. The object of this course is primarily to enable students to gain a wide general knowledge of marine forms, and to this end special attention will be devoted to collecting both along the shore at low tide and at the surface of the ocean. (Weymouth)

3. **General Botany.**—An elementary course open to any one desiring an acquaintance with representative forms of the great divisions of the plant kingdom. The time is divided about equally between the collection and identification of material in the field and careful study of representative forms in the laboratory. Daily lectures or conferences. (Burlingame)

4. **Botany.**—General Morphology of Algæ. An elementary course open to all students. The time is divided between field work,

including a study of the distribution, habits, methods of collecting, methods of preserving, etc., of both marine and fresh water forms of the vicinity, and a systematic study of the morphology of the plants in the laboratory. (BURLINGAME)

4. Botany.—Special Algæ. Open to students who have had course 2 or an equivalent. The curriculum of this course is adapted to the needs and wishes of the students. Prospective students are requested to confer with the instructor before registering for the course. (BURLINGAME)

5. Research in Animal Histology and Cytology.—Opportunity is given to a limited number of students, with suitable preparation, to take up original investigation in the above subjects under such guidance and advice as may be necessary. The work will be planned to suit the desires and needs of the individual student. Arrangements for this work are to made before the beginning of the session. (MCFARLAND).

Students successfully completing any of the above courses receive five units of university credit. Only one course can be taken during the session.

Laboratory Fee.—The laboratory fee is twenty-five dollars.

UNIVERSITY LIBRARY

GEORGE THOMAS CLARK, Librarian.
JOHN EDWIN GOODWIN, Assistant Librarian.
SYDNEY BANCROFT MITCHELL, Head of Order Department.
HELEN BINNIGER SUTLIFF, Head Cataloguer.
ALICE NEWMAN HAYS, Classifier.
HELEN LATHROP, Reference Librarian.
EDITH MARGARET COULTER, Head of Serial Department.

The Library is housed in the Thomas Welton Stanford Library Building, which forms the central portion of the easterly half of the outer quadrangle façade. On the main floor are the general reading rooms, with accommodations for 220 readers, the reference room, serial room, and catalogue room. On the second floor are six seminary rooms, used respectively by the Departments of Economics, English Literature, Germanic Languages, Greek, Latin, and History.

The Library is open during term time on week days from 8:00 a.m. to 10:00 p.m., except on Saturdays, when it is closed at 3:30 p.m.

During the short vacation the hours are from 8:00 a.m. to 4:00 p.m., Saturdays to 12:30 p.m., and during the long vacation from 9:00 a.m. to 4:00 p.m., Saturdays 9:00 a.m. to 12:00 m. The shelves are open to members of the faculty, and to students engaged in advanced work upon the recommendation of their instructors. Books, other than works of reference, not required for class use, are lent for a period of two weeks.

Including the Law Department collection the Library contains upwards of 160,000 volumes, and the number is rapidly increasing. Noteworthy special collections are as follows:

The Jordan Library of Zoology.—A collection consisting largely of works on ichthyology, to a considerable extent made up of a vast number of authors' separates, which have been accumulated by President Jordan, bound in convenient form, indexed, and catalogued. The more voluminous publications, such as the works of Cuvier, Lacépède, Bloch, Bleeker, Gunther, and others, are well represented. These, supplemented by the proceedings of various societies and institutions, make a collection of books of great value to advanced students and investigators in ichthyology. The library is conveniently arranged, and is situated in the Zoology building near the laboratories and collections.

The Barbara Jordan Library of Birds.—A memorial collection presented by President Jordan, and to which frequent additions are made. While some of the older texts are not represented, it is a good working library of ornithology and contains the principal modern works on the subject.

The Hopkins Railway Library.—A collection of approximately 10,000 volumes and pamphlets dealing with the subject of transportation. In 1892 Mr. Timothy Hopkins, of San Francisco, presented to the University his private library on railroads, consisting of about 2,000 books, personally providing for its maintenance and growth for many years. At present there is an annual library appropriation for this purpose. The collection is shelved by itself in one of the seminary rooms. It is general in scope, intended to embrace all subjects touching on the building, maintenance, and operation of railways. It is especially rich in state and government reports, as well as in reports of individual railroads both in the United States and Europe, with much material pertaining to their history.

The Hildebrand Library.—In 1895 the University acquired the library of the late Professor Hildebrand, of Leipzig, containing more than 5000 volumes and pamphlets relating largely to Germanic languages

and literature, the seventeenth and eighteenth centuries being especially well represented, and including also a notable collection of three hundred old dictionaries. The value of the books is greatly enhanced by the manuscript notes of Professor Hildebrand.

The Thomas Welton Stanford Australasian Library.—A good working collection of books relating to Australia and New Zealand. It is especially rich in early voyages, travels and descriptions. Several hundred volumes of parliamentary reports of the Australian states, the Commonwealth, and New Zealand, are included. The publications of learned societies, such as the Royal Societies of New South Wales and Victoria, the Australian Museum, and the New Zealand Institute, are well represented, while considerable pamphlet material also is available.

The Jarboe Collection on the French Revolution.—Acquired in 1910. It contains original materials, principally in French, relating to the Revolutionary and Napoleonic era. Two features of the collection are of particular interest to advanced students of history—the original and contemporaneously printed pamphlets, of which many are unusual; and the memoirs, of which there is a comprehensive selection.

The Lane Medical Library.—Founded by the directors of Cooper Medical College in accordance with the bequest of Mrs. L. C. Lane, and occupying rooms in the Cooper College building, Sacramento and Webster streets, San Francisco. It contains over 35,000 volumes, and is particularly rich in its collection of medical and allied periodicals. The leading domestic and foreign journals are currently received.

Students may also have access to the geological library of Professor Branner, in room 333, Geology building. It contains over 30,000 books, pamphlets, and maps, relating chiefly to geology, mineralogy, paleontology, geography, exploration, metallurgy, and mining, including most of the state and government reports and the publications of scientific societies in all parts of the world. Particulars regarding the sets may be seen at the Reference Desk in the general library.

THE MEMORIAL CHURCH

The Rev. David Charles Gardner, Chaplain.
Godfrey Carl. Buehrer, Organist.

Pending the restoration of the Memorial Church, services of public worship are held in the lecture room commonly called the University Chapel.

The following special preachers have been invited to occupy the chapel pulpit on alternate Sunday mornings:

September 18, 1910—The Rev. George C. Eldridge (Presbyterian), Berkeley.

October 2—The Rev. Albert W. Palmer (Congregationalist), Oakland.

October 23—The Rev. William K. Guthrie (Presbyterian), San Francisco.

November 6—The Rev. Dr. Brougher (Baptist), Portland.

November 20—The Rt. Rev. William Ford Nichols (Episcopalian), San Francisco.

December 11—The Rev. Matt Hughes (Methodist), Pasadena.

January 15, 1911—President John Willis Baer, Occidental College. Los Angeles.

January 29—The Rev. W. B. Hinson (Baptist), Portland.

February 5—The Rev. E. V. Shayler (Episcopalian), Seattle.

February 19—The Rev. Bishop Edwin Holt Hughes (Methodist), San Francisco.

March 5—The Rev. Bishop William Melvin Bell (United Brethren), Berkeley.

March 19—The Rev. E. C. Hodgin (Unitarian); Los Angeles.

April 9—The Rev. Dana Webster Bartlett (Congregational), of Los Angeles.

UNIVERSITY CHOIR

Godfrey C. Buehrer, Organist and Director.

The University Choir.—The University Choir sings at the regular University Services held Sunday mornings at 11 o'clock. There are three sections in the choir: A, B, and C (the instrumental section, or choir orchestra). Choirs A and B sing every other Sunday. Choir C plays once a month. Regarding entrance conditions, see the Director.

1 unit per semester

Musical Theory.—A course in musical theory, harmony, sight-singing, ear-training, etc. Open to members of the choir.

1 unit per semester

LECTURES, RECITALS, LITERARY CONTESTS, HONORS, AND CLUBS

University Lectures

1. Dr. Ernest Daenell, of Kiel, Germany, Kaiser Wilhelm Professor at Columbia University—(1) *Germany and Europe;* (2) *Development of World's Commerce 16th to 20th Century;* (3) *Graduate Study in German Universities;* (4) *Protection and Imperialism.*

2. Dr. James A. Macdonald, Editor of the Toronto *Globe—The Men of the Glens.*

3. Miss Ida M. Tarbell, of New York—*The Method of Lincoln.*

4. The Hon. Theodore Roosevelt, of Oyster Bay, N. Y.—*Productive Scholarship.*

5. Mr. Joseph Fels, Philadelphia, Pa.—*Economic Justice.*

Musical and Dramatic Recitals

1. Concert by Dr. Ludwig Wullner.

2. Dramatic Readings by Miss Lucine Finch.

3. Presentation of Hubert Henry Davies' *Cousin Kate,* by the Senior Class.

4. Presentation of Gilbert and Sullivan's *The Mikado,* by the Schubert Club.

5. Presentation of George Bernard Shaw's *The Devil's Disciple,* by Sword and Sandals and The Masquers.

6. Presentation of the Chester *Miracle Plays,* by the English Club.

7. Presentation of *The Senator,* by the Sophomore Class.

8. Presentation of *Live Wires,* by the Women's League.

9. Presentation of *The Uvernian Princess,* by the Junior Class.

University Assemblies

1. President David Starr Jordan—*War and Manhood.*

2. Professors John Casper Branner, William Frederick Durand, George James Peirce, and Frederic Campbell Woodward.

3. Professor Frank Angell, Messrs. George Armand Ditz, Almon Edward Roth, Harold Gale Ferguson.

4. President David Starr Jordan—*International Peace.*

5. Rev. Charles Frederick Aked, New York—*Abraham Lincoln.*

6. Baron D'Estournelles de Constant, France.—*The Conciliation of Nations.*

COMMENCEMENT ADDRESSES—May 23, 1910

President WILLIAM FREDERICK SLOCUM, Colorado College—*The Nation's Guarantee of Personal Rights.*

President DAVID STARR JORDAN—*The Wealth of Nations.*

FOUNDERS' DAY—March 9, 1911

Address by Dr. JAMES A. MACDONALD, Editor of the Toronto *Globe*—*Lessons to America from England's Experience.*

UNDER AUSPICES OF THE YOUNG MEN'S CHRISTIAN ASSOCIATION

The Rev. W. T. PATCHELL, San Jose—*Growth of our idea of God.*

The Rev. JOHN M. DEAN—*The Bible and the Freshman.*

President DAVID STARR JORDAN—(1) *The Religion of a Sensible American*; (2) *Elements of Success in Life*; (3) *Earning Happiness.*

Mr. GALE SEAMAN, Los Angeles—*The Real Cost of Spiritual Life.*

Mr. J. P. HAGERMAN—*Winning a University.*

Mr. GEORGE A. TITUS—*Solving Hard Problems in Y. M. C. A. Work.*

Mr. CHARLES L. DUNCAN—*Mission Work in Beyrut, Syria.*

Mr. E. C. MERCER, New York—*Purity, and the Fight for a Clean Life.*

Mr. E. C. CARTER, New York—*Essentials of Successful Leadership.*

Mr. CLAYTON S. COOPER, New York—*Bible Study in all Lands.*

Bishop EDWIN HOLT HUGHES, San Francisco—*A Modern Challenge to the Strong.*

THE RAYMOND FRED WEST MEMORIAL LECTURES ON IMMORTALITY, HUMAN CONDUCT, AND HUMAN DESTINY

"In memory of our beloved son, Raymond Fred West, a student in Leland Stanford Junior University, who was drowned in Eel River, California, on January 16, 1906, before the completion of his college course, we wish to present to the trustees and authorities of the Leland Stanford Junior University, at Palo Alto, California, the honored Alma Mater of our son, the sum of ten thousand dollars, to be held as a fund in perpetual trust, for the establishment of a lectureship on a plan similar to the Dudleian Lectures and the Ingersoll Lectures at Harvard University.

"By this plan, in each collegiate year, or on each alternate year, at the discretion of the Board of Trustees, from one to three lectures shall be given on some phase of this subject: 'Immortality, Human Conduct, and Human Destiny.'

"It is our wish that such lectures shall not form part of the usual college or university course, nor shall they be delivered by any professor or instructor in active service in the institution. Such lecturer may be a clergyman or a layman, a member of any ecclesiastical organization, or of none, but he should be a man of the highest personal character and of superior intellectual endowment. He shall be chosen by the Faculty and the Board of Trustees of said University in such manner as the said Board of Trustees may determine, but the appointment in any case shall be made at least six months before the delivery of said lecture.

"The above sum is to be safely invested, and the interest thereof is to be divided, at the discretion of the Board of Trustees, into two parts, the one an honorarium to the lecturer, the other for the publication of said lecture, or the gratuitous distribution of a number of copies of the same if published by the author.

"The manuscript of the course of lectures shall become the property of the University, and shall be published by the University unless some other form of publication is more acceptable.

"The course of lectures shall be known as the 'Raymond Fred West Memorial Lectures on Immorality, Human Conduct, and Human Destiny.'"

In accepting this gift from the donors, Mr. and Mrs. Fred West, of Seattle, Washington, and establishing the lectureship as provided in the terms of the gift, the University has adopted the following plan and regulations:

That these lectures be delivered on alternate years, the first in the year 1911; that the lecturer give at least three lectures; that these lectures be published in book form within not less than two years; that the lecturer have the option of publishing them himself, in which case the University will purchase a hundred copies, or of having the University publish them, in which case it will retain the copyright. In any case, the manuscript of the lecturer must be filed in the University archives;

That the honorarium given be decided in each case by the Board of Trustees, and that unless otherwise ordered the entire earnings of the West fund for the two years be devoted to honorariums and to the purpose of publication;

That the West Lecturer be each time nominated by the President, with the approval of the Advisory Board, and the consent and ratification of the Board of Trustees, as is the case with ordinary appointments.

In 1911 the West lectures were given by the Rev. Charles E. Jefferson, D. D., of the Broadway Tabernacle, New York. The subjects of the lectures were:

1. *Reasons for a Restudy of Human Destiny.*
2. *The Argument against Immortality.*
3. *The Argument for Immortality.*

The Bonnheim Ethical Dissertations and Discussion

The purpose of the Bonnheim dissertations and discussion, as defined by the founder, Mr. Albert Bonnheim, of Sacramento, is as follows: "It is not so much desired to obtain new facts or new truths in ethics as it is to place the truth which we now have before as many students as possible, so that they will take greater interest in questions dealing with ethical problems." The competition is open to all undergraduate students of Stanford University, and is divided into two parts:

1. *The Bonnheim Dissertations.*—The general regulations governing the competition are as follows: Each competitor must deposit with the Registrar before the first day of November an essay upon the subject assigned by the committee. The essays must not be signed, but should have some mark of identification and be accompanied by a sealed envelope containing the name of the author. They must be typewritten on thesis paper of regulation size. No limit of length is prescribed, but a treatment not to exceed ten thousand words is recommended. The subject announced is intended by the committee to be a general one. It is desirable that dissertations be limited to some particular phase of the general subject. The judges will announce the names of the five competitors who present the best Bonnheim dissertations, awarding them premiums of $25 each. But no award will be made to any essay not deemed worthy of recognition.

2. *The Bonnheim Discussion.*—The winners of the Bonnheim premiums for dissertations shall be qualified to engage in the discussion, which will be upon the same subject as the dissertations, and which will be held the first or second week in December. The Bonnheim prize of $125 will be awarded to the speaker who in his discussion of the subject shows the clearest insight and makes the most effective presentation. Each speaker will be allowed twenty minutes.

The general subject for 1910 was "Ethical Aspects of Intercollegiate Rivalry." The judges of the dissertations were Mr. William T. Reid, Jr., of Belmont, the Rev. David Evans, of Palo Alto, and Professor Herbert E. Bolton; of the discussion, Mr. Beach Thompson, of Menlo

Park, the Rev. Cecil Marrack, of San Francisco, and Mr. W. T. Shedd, of Palo Alto. Premiums were awarded to Frank Ernest Hill, Frank Howard Hilton, and Paul Morgan Ogilvie. The Bonnheim prize was won by Frank Howard Hilton.

The general subject for 1911 is "Professional Ethics." The essays are due at the Registrar's Office, November 9. The judges will announce the Bonnheim premiums November 22, and the discussion will take place December 1.

Intercollegiate Debate

An Intercollegiate Debate, under the auspices of the Associated Students of the University of California and of the Leland Stanford Junior University, is held in April of each year. In 1911 the debate was held at the University of California.

The question for 1911 was, "Resolved, That the United States should establish a central bank, waiving the constitutionality of the question."

The contestants were: Newton Bishop Drury, John Janney Miller, Frederick Milton Shipper, of the University of California; and Frank Howard Hilton, R. Justin Miller, and Harry Robert Person, of Stanford.

The debate was won by the University of California.

Carnot Medal

The Carnot Medal, presented by the Baron de Coubertin, for the purpose of encouraging the study and discussion, in California, of French history and politics, is awarded annually to the student who, in the opinion of the judges, proves himself the best debater in a contest held for the purpose between Stanford University and the University of California.

Under the rules of the contest a general subject for the debate was announced November 18, 1910, but the particular phase of the question, as embodied in a resolution, was not made known to the contestants until February 3, 1911, two hours before the time set for debate.

The general subject for 1910-11 was, "The Relation of the French Government to the Labor Problem," and the particular question debated was, "Resolved, That the developments of the labor problem during the last decade have threatened the stability of the French Republic." The debate was held at Stanford University, February 3, 1911. The contestants were: Tracy Barrett Kittredge, Frederick

MILTON SHIPPER, and JOE GOODRICH SWEET, of the University of California; and FRANK HOWARD HILTON, R. JUSTIN MILLER, and EUGENE EARL TINCHER, of Stanford. The judges were Mr. CHARLES A. MURDOCK, Mr. HENRY PAYOT, and Judge LUCIEN SHAW, of San Francisco. The medal was awarded to FREDERICK MILTON SHIPPER, of the University of California.

THE PACIFIC COAST DEBATES

Debates with the Universities of Washington and Oregon are held on the last Friday in March of each year, under the auspices of the Pacific Coast Debating League composed of the Leland Stanford Junior University, the University of Oregon, and the University of Washington. Each institution is represented by two teams of two men each. The teams debate the affirmative and negative of the same question, which is chosen by the intercollegiate debating committees of the three institutions. The affirmative side of the question chosen debates at home, while the negative side contests at one of the other universities.

The question for 1911 was, *"Resolved,* That the United States Should Adopt a System of Ship Subsidies." The contest was held March 31, 1911.

At Stanford the contestants were: PERCY M. COLLIER and VERNER MOTSCHENBACHER, of the University of Oregon, and EUGENE EARL TINCHER and GRANVILLE NUMAN WOOD, of Stanford. The debate was won by Oregon. At Seattle the Stanford contestants were WILLIAM BROWNLEE OWENS and ALBERT GROVER BRADFORD, and the University of Washington was supported by CHARLES MCKINLEY and ANDREW RICHARD HILEN. The debate was won by Washington. On the same evening the remaining teams representing Oregon and Washington debated at Eugene. The debate was won by Oregon. The University of Oregon was declared winner of the series.

In 1912 Stanford will meet Washington at Stanford and Oregon at Eugene. Oregon and Washington will meet at Seattle.

THE EDWARD BERWICK JUNIOR PEACE PRIZE

Under the auspices of the California Branch of the American Peace Society, an annual prize of fifty dollars, called the Edward Berwick Junior Peace Prize, is offered for competition by students of Stanford University. The award is made to that speaker who, in a public contest, delivers the address which in the opinion of the judges is most

effective in promoting the cause of international peace. A student who has once won the peace prize is not eligible to participate again in the contest. In 1910 the contest was held on November 22, and the prize was awarded to Mr. Frank Ernest Hill.

Essays on Total Abstinence

A prize of fifty dollars is offered annually, under the auspices of the Woman's Christian Temperance Union, to Stanford students for the best essay on Total Abstinence from Alcoholic Liquors. In 1910 the prize was won by Mr. John David Houser.

Essays in competition for this prize should contain not less than two thousand and not more than three thousand words, and should be sent to the Committee on Literary Contests on or before May 1, 1911. The particular subject proposed for the year is "The Relation of Individual Total Abstinence to National Prosperity." The award will be made by a board of judges chosen jointly by officers of the Woman's Christian Temperance Union and the Faculty Committee on Literary Contests. No award will be made if no manuscript is deemed worthy of special recognition. The winning essay is eligible for competition for a national prize of one hundred dollars, awarded to the best manuscript of those which have already won a local award.

Memorial Scholarship

The Leland Stanford Junior Scholarship, established by Mrs. Stanford, in 1900, pays the necessary expenses of its holder throughout the undergraduate course. The present holder of the scholarship is Mr. Francis Sitwell Pratt, of Ontario, California.

The Joseph Bonnheim Memorial Fund

April 5, 1897, Albert Bonnheim and wife, of Sacramento, California, founded the Joseph Bonnheim Memorial Fund, for the purpose of assisting worthy boys and girls to receive an education, "having in view such preparation and training, scholastic and otherwise, as will make the beneficiary self-sustaining by whatsoever trade, profession, or calling may seem best adapted for such purpose in each case." Applications for scholarships to be awarded in accordance with the provisions of this fund should be addressed to the Trustees, care of Albert Bonnheim, Secretary, Sacramento, California.

Miss Blanch Rible, '10, is a present holder of a Bonnheim Scholarship.

Harvard Club Scholarship

The Harvard Club of San Francisco maintains a scholarship for the purpose of aiding graduates of the University of California and of the Leland Stanford Junior University to pursue graduate work at Harvard University. Appointments to this scholarship are for one year only and are made in alternate years to graduates of the two Universities. The present income of the scholarship is $400.

The Forum

The Forum, organized in 1909, is a Faculty Club for the unofficial discussion of academic questions. The following papers were presented in 1910-11:

September 16, 1910. Associate Professor Raymond Macdonald Alden —*The Non-Vocational Student.*

October 21. Professor David Prescott Barrows, of the University of California—*The Prospects of Graduate Study on the Pacific Coast.*

November 22. Professor Augustus Taber Murray—*Methods of University Instruction.*

December 17. Dr. Orrin Leslie Elliott—*University Standards and Student Activities.*

January 27, 1911. President David Starr Jordan—*The Making of a Darwin.*

February 24. Associate Professor Albert Conser Whitaker—*Professional Insurance in Relation to the Carnegie Foundation.*

March 18. Miss Ida Minerva Tarbell, of New York—*The Magazine as a Factor in Education.*

April 14. Professor Frederic Campbell Woodward—*The Education of a Lawyer.*

May 12. Professor Harris Joseph Ryan—

Philological Association

Professor Ewald Flügel, President.
Assistant Professor Benjamin Oliver Foster, Secretary.

The University Philological Association was organized September 17, 1892, for the purpose of reading and discussing results of scientific investigations in language and literature. The membership consists of the instructors and advanced students in the different language departments in the University. The regular time of meeting is the first Thursday of each academic month, excepting September,

January, and May, at 8:00 p.m. The following papers were presented during the calendar year ending April, 1911.

October 13, 1910. Professors JOHNSTON, SEARLES, ALLEN, MURRAY, FLÜGEL, and HEMPL—*Addresses Commemorative of the late Professor John Ernst Matzke.*

November 3. Assistant Professor ALBERT LÉON GUÉRARD—*Voltairianism in French Literature of the Second Empire.*

December 8. Assistant Professor WILLIAM DINSMORE BRIGGS—*The Influence of Ben Jonson's Tragedy in the Seventeenth Century.*

February 2, 1911. Associate Professor OLIVER MARTIN JOHNSTON—1. *The Italian Historical Infinitive.* 2. *French Verb Phrases meaning "just miss."* Assistant Professor BENJAMIN OLIVER FOSTER—*Two notes on Propertius.*

March 9. Professor GEORGE HEMPL—*Three Early Etruscan Inscriptions.* Assistant Professor AURELIO MACEDONIO ESPINOSA—*A Romance Etymology.*

SCIENCE ASSOCIATION

Professor LEANDER MILLER HOSKINS, President.
Associate Professor SIDNEY DEAN TOWNLEY, Vice-President.
Instructor GEORGE FRANCIS MCEWEN, Secretary.

The Science Association was organized January 17, 1894. Original investigations and papers of general interest on scientific topics are presented from time to time.

The following papers were read before the Association between April, 1910, and April, 1911.

Assistant Professor LE ROY ABRAMS—*The Trees and Shrubs of Southern California.*

Associate Professor HANS FREDERICK BLICHFELDT—*The Theories of Time and Space of Lorenz and Minkowski to explain certain Phenomena of Light.*

Professor FERNANDO SANFORD—*Cohesion.*

Assistant Professor RENNIE WILBUR DOANE—*The Development of Medical Entomology.*

Assistant Professor LUTHER WILLIAM BAHNEY—*Fakes in Metallurgy.*

Associate Professor HANS ZINSSER—*Problems and Future Possibilities in the Study of Immunity.*

Assistant Professor SAMUEL BARCLAY CHARTERS—*Modern Electric Lighting.*

The University Conference

President—Hans Christian Nelson, '10.

Vice-President—Edwin Clark Matthias, '11.

Secretary—Karl Ludwig Schaupp, '12.

Advisory Committee—Hans Christian Nelson, '10, Hale McCowen, '10, Karl Ludwig Schaupp, '12, George Armand Ditz, '11, Ralph Leon Hughes, Jr., '10.

Members—Adolphus Benjamin Bianchi, '10, Harry Harmon Blee, '10, Samuel Bryan, '10, Hale McCowen, '10, Ralph Leon Hughes, Jr., '10, Hans Christian Nelson, '10, Frank Walter Weymouth, '10, Clarence Earl Blee, '11, Henry Prosper Cheda, '11, George Armand Ditz, '11, Harrison Paul George, '11, Robert Cecil Hamilton, '11, Frank Ernest Hill, '11, Emil Frederic Hollmann, '11, William Noble Lacy, '11, Eugene Garrison McCann, '11, Edwin Clark Matthias, '11, Benjamin Everett Parsons, '11, Royal Upson St. John, '11, Ralph Edward Sanborn, '11, Elbert Cecil Woodcock, '11, Thomas Lynch Coleman, '12, Garton Donald Keyston, '12, Herman Endres, '12, Cyril Raymond Nunan, '12, Karl Ludwig Schaupp, '12.

The University Conference is a representative body chosen by department groups from students having fifty or more units of university credit. The President of the Associated Student Body is ex-officio a member of the Conference.

Each department in which approximately forty or more men students are enrolled elects one representative for every forty men enrolled. Departments having less than forty men students are divided into groups so that the aggregate of men students shall be approximately forty in each group, and each group elects one representative.

The Conference elects from its own members a Student Advisory Committee whose duty is to deal especially with matters of discipline, using all proper influences to prevent such cases from arising, and to act on such cases in behalf of the student body, independent of any action which may be taken by the authorities of the University.

The Conference is also directed to consult with the President of the University and with the administrative committees of the University Council in regard to matters pertaining to the general welfare of the University.

LELAND STANFORD JUNIOR MUSEUM

Harry C. Peterson, Curator.
Albert H. S. Chuck, Assistant Curator.
Aubrey Hamilton Garner, N. B. Nelson, I. Williams, B. Kawakama, Assistants.

In 1880, Leland Stanford, Junior, then eleven years of age, accompanied his parents on a trip through Europe, and collected numerous mementoes of the places visited. In 1883, on a second trip he began to pursue this object more ambitiously, and finally with the idea of establishing a museum. The Leland Stanford Junior Museum was designed by Mrs. Stanford as a memorial to perpetuate this idea, and the various collections are mainly her gift to the Museum.

The collection made by Leland Stanford, Junior, between 1880 and 1884, has been placed in two rooms (A and B), and in room A his own arrangement is reproduced in detail. In the room adjoining (B) are found mementoes of his early life. These two rooms contain especially Egyptian bronzes, Tanagra figurines, Greek and Roman glass, armor, mosaics, Sèvres and Dresden ware, and the like.

The Memorial Room (O) was designed to contain personal mementoes of Senator and Mrs. Stanford. The collection includes ancestral portraits of the Stanford and Lathrop families; two cases devoted to the Grant family collection; racing trophies; Muybridge's first photographs of "Animals in Motion," and subsequent works; the "Last Spike," and other historic relics of the Central Pacific Railroad; a large assortment of Point, Alençon, Chantilly, Duchesse, Honiton, Valenciennes, and other laces; India shawls, fans, Worth dresses, antique jewelry, and European souvenirs.

The vestibule and upper corridor are devoted principally to statuary, old and rare books, papers, etc., including Duc de Loubat's reproductions of Aztec and Mexican manuscripts, a 16th century illuminated Turkish Koran, Lord Kingsborough's "Antiquities of Mexico," and German engravings.

The Di Cesnola Collection (rooms C and E) contains five thousand pieces of Greek and Roman pottery and glass from the Island of Cyprus.

Room F contains a collection of Venetian glassware and chandeliers, mirrors, and mosaic art pieces, the gift of Messrs. Salviati & Camerino, of Venice, Italy. Iridescent glass, Etruscan vases, Roman lamps, sculp-

tured marble heads, and bas-reliefs of the first century were added by Mrs. Stanford.

The American collection (I) is made up of mound relics, Indian baskets, Acoma ware, utensils, Alaskan canoes, totem poles, etc. In this room is also a display of material of the stone age purchased by Mrs. Stanford in Denmark, as well as a collection of Samoan relics and war implements, given by President Jordan. The center case in this room contains practically all the implements extant of the old Mission Dolores, presented by Don Pablo Vasquez, whose father was the last major-domo of the Mission.

In the Chinese and Japanese room (K) there is a collection of bronzes, arms, china, lacquer, cabinets, musical instruments, rich embroideries, and specimens of wood-carving, including the Imperial bedroom set, a marvel in wood-carving and inlaid work.

The Japanese collection, purchased by Mrs. Stanford in 1902, consists of cloisonne, Satsuma, porcelain, embroideries, Buddhistic images, and ivory carvings. The large bronze Koro, over 300 years old, is especially noteworthy. The Corean collection, the gift of Mr. Timothy Hopkins, contains costumes, household goods, cabinets, screens, etc. Mr. Hopkins has also placed in the Museum a collection of ancinent and modern coins and medals (Room F).

The Fine Arts Collections (rooms P, Q, R, U, and V) include pictures by Messonier, Bouvier, Bonnat, Richter, Carolus-Duran, Van Wyck, Bierstadt, Ch. Landelle, Courtois, Piot, Munier, Brozik, Ricci, Humphrey Moore, Porteilje, Bradford, E. Paoletti, Mazzoni, Keith, Hill, Charles Nahl, C. T. Wilson, and many others.

The most important collection donated to the Museum during recent years consists of eighty-five oil paintings presented by Mr. Thomas Welton Stanford of Melbourne, Australia. These pictures include very rare canvasses and panels from such artists as Minderhout Hobbema, James Giles, R. S. A., John Frederick Herring, Lienur, Van den Houten, Francis Snyders, W. J. Laidlay, David Bates, John Yarley, Julius M. Price, J. W. Ready, William Melby, James E. Meadows, Elijah Walton, F. G. S.; W. Henry, W. Koek-Koek, E. Wake Cook, T. R. Miles, Sr., John Glover, Herr Schnars-Alquist, Louis Buvelot, William Hart, William Shiels, R. S. A., S. Bird, Patrick Nasmyth, Emil Bayard, Gerard Lairesse, C. Wimmer, Salvator Rosa, G. Koken, John Weenix, Bachman, Kobell, Jr., Charles Stuart, Heinrich Rasch, Melchoir Hondecooter, Marie Angelica Kaufman, Ten Kate, George Earl, Guardabassi, and E. G. Lewis. The collection is in

Room U. In addition to this large collection, Mr. Stanford previously donated a group of sixty oil paintings of Australian scenes, the work of I. W. Curtis, a noted artist of Australia. Many of these are now hung in Room Q.

Room V contains the Anna Lathrop Hewes collection of paintings, statuary, mosaic, etc. Ceramics collected by Mrs. Stanford include Sèvres, Dresden, Royal Berlin, Persian, Pompador crystal, Bohemian, and numerous other wares.

Through the courtesy of Wells, Fargo & Co., all gifts intended for the Museum will be transported free of charge over their lines, in shipments of fifty pounds or less, from railroad points in California, Oregon, and Nevada, if addressed to The Curator, Leland Stanford Junior Museum, Stanford University, California.

Pending the complete restoration of the Museum building, a temporary installation of exhibits has been made in the main portion.

Museum hours: 10:00 a.m. to 5:00 p.m. except Sundays and holidays.

DEGREES CONFERRED

*September 10, 1909; †January 14, 1910; May 23, 1910.

BACHELOR OF ARTS

GREEK

Alice Honeyman Collier
Blanch Rible
Hazel Gladys Smith

LATIN

William Chislett, Jr.
†Margaret Anna Croghan
Donella Mary Cross
†Isabel Mary Duff
†Marion Faber
Abigail Frances McKee
Emily Hannah Radcliffe
Minnie Bertha Smith
†Annie Blanche Wallace

GERMANIC LANGUAGES

Lulu Beeger
Zayda Edith Bothwell
Eva Belle Clark
†Auguste C. Flentjen
Margaret Flickinger
Florence Catherine Gandolfo
†Carrie Amanda Goodhue
†Jacob Anton de Haas
Edna Hayward
Eva Hoff
Clefa Edna Keller
Bertha Jane Knapp
†Jennie Cloughly Moore
Charlotte Watrous Morrison
Merle Brownie Mues
Ida Stauf
Blanche Amelia Thurmond
Mabel Elouise Van Zwalenburg
Ruth Ermina Wheeler
Adaline Wright

ROMANIC LANGUAGES

Alice Louise Chapman
Henry Haxo

ENGLISH

Clement Harisse Arnold
†Freeland Hightower Ashley
Gem Lee Barker
Elisabeth Lee Buckingham
Sarah Elizabeth Bundy
Mary Caroline Coman
†Hiram Cornell Fisk
Lenora Enid Flagg
Edith Lawson
Marcia Brucker Lever
Stella A. Miller
Geoffrey Francis Morgan
Lila Morris O'Neale
†Sade Oppenheimer
*Mattie Rankin Osborne
Ethel Rebecca Palmer

Alice Belle Fowler
Ruth Thayer Frary
†Reba Robins Galvin
Florence Gilbert
Helen Howard Ham
Frieda Mathilda Hauswirth
Bessie Belle Hoover
†Lillie May Rible
Alice Eleanor Shinn
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Frances Cleveland Burkhalter
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Robert Luther Duffus
Mary Constance Edwards
Lillian McLaine Farnsworth
†Hazel Dolores Flood
Helen Green
†Miriam Alice Harris
Maude Teresa Howell
Emily Bayard Johnson
Blossom Edith Lenfest
†Ralph LeRoy Milliken
Jessie Caroline Morgan
Ruth Edna Robertson
Anita Arline Shepardson
Anna Matt Shumate
Sarah Helen Starr
†Rose Florence Sturla
Monette Osie Todd
Zoe Lucile Watkins

ECONOMICS AND SOCIAL SCIENCE

*Leon Ardzrooni
†Harold Wilcox Beard
†Virgil Franklin Bellows
†John Clarendon Boyle
Samuel Bryan
Clarmae Budde
*William Roswell Camp
William McGlashan Duffus
Lester Lettwich Frank
†Melvin Frederick George
†Lowell Jay Hart
Samuel John Hayes
Winn Earl Holmes
*Frank Kennedy Jackson
†Thomas Henry Kelly
Edward Antes Little
Mowatt Merrill Mitchell
Harry Earl Reed
Alice Edna Walker
George William Wood

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*Frank Thomas Bates
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Robert Marcus Burgunder
George Barnard Bush
Thurman Alden De Bolt
Robert Emmet Fitzgerald
Robert McFarlin Ford
William Parmer Fuller, Jr.
†Louis Walter Handel
*Raymond Earl Hodge
John Henry Large
Erle Mervin Leaf
Samson Arthur Lindauer
†Frederick William McNulty
Hans Christian Nelson
William Herbert Patterson
Ernest Reynolds Purdum
Elias Victor Rosenkranz
James Errett Shelton
Clyde Clarence Shoemaker
†Arthur Adolph Steinberger
*William Moore Walker
Frederick Bertram Wood

GRAPHIC ART

Hazel Jane Bardin
Jennie Sherwood Hughes
Henry Varnum Poor
Leland Stanford Scott
Mabel Warrior

MATHEMATICS

Mildred Hornsby Harrigan

PHYSICS

Lucy Emeline Leaming
Eulalia Richardson
Alta Dorthula Stone

CHEMISTRY

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†Dean Winslow Buchan
Khagendra Chandra Das
†Walter Hamilton Hill
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Thornton Mills Hopler
Eloise Jameson
*Burton Earle Long
Clyde Coad Marchant
†George Emil Mortensen
Arthur Lee Munger, Jr.
Arthur Henry Myer
Robert Wade Poindexter, Jr.
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Paul Herman Waldraff
Elmer Rupel Weaver

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Melissa Evelyn Clark
Mary Juanita Couch
Maude Juanita Landon
*Samuel Hash Sherfy

PHYSIOLOGY AND HISTOLOGY

†Cornelia Bonnell
Bessie Alberta Curry
Nell Elizabeth Ford
Harriet Schulze King
George Carl H. McPheeters
Orland Franklin Montgomery
Wayland Augustus Morrison
Glenn William Reyburn
William White Southard
Francis Stolle
Otto Emile Utzinger

ZOOLOGY

Helen Flickinger
*Josephine Louise Dows Randall

ENTOMOLOGY

Florence Cotton Burrell
†William Mark Davidson
Georgina Evelyn Hadden

GEOLOGY AND MINING

†William Welsh Adams
Thomas Childrey Baker
Arthur William Burgren
William Augustus Cashbaugh
†Albert William Frolli
Charles William Henderson
George Alexander Macready
Edward A. Melczer
†Clarence Jennings Peterson
Charles Alfred Randall
Warren Sumner Rice
Alfred Kirk Schellinger
†Alvin Theodore Schwennesen

CIVIL ENGINEERING

William Worden Abright
Charles Everett Bee
Alexander Truman Case
Archibald Beethoven Cook
Garrison Costar
Arthur Donald Edmonston
George Joseph Fisher
Dell Duane Gammon
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Walter J. Harris
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Gregor McGregor
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†Octavius Weller Morgan
Robert Farley Morris
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Jacob Overwin Oltmans
Merle Bentley Piper
Carl Edward Sandstett
Homer J. Sharp
Wilson Sidwell
David Drake Smith
Peter Soo-Hoo
James Blaine Swickard
Burchell Williams Upson
James Milton Wadsworth
David Henry Walker, Jr.
Raymond Prescott Webb
Clarence R. Young

MECHANICAL ENGINEERING

Rueben Elmer Beckley
Harry Harmon Blee
Lucien Peter Brassey
Harry Lee Hess
Archibald Forbes Meston
Carl Joseph Moroney
Clifford Taylor Norwood
†Edwin Allan Rogers
Herbert Clifton Warren
†John Arthur Young

ELECTRICAL ENGINEERING

Clyde Arthur Binns
Clarence Linn Bradley
Harry Putnam Cramer
†Sanford Ballard Dole
Leslie Marion Edwards
Anthony Endres
John Raymond Holman
†Ayao Hori
Robert Clyde McFadden
James Barbour Moorhead
†Robert Folsom Myers
Franklin Thomas Parker
W. Dhu Aine Peaslee
Charles Kirland Ransom
Philip Archibald Robinson
Carlos Eugene Sampson
Cary Peebles Taylor
Rupert Wall

MASTER OF ARTS

GREEK

Margaret Elizabeth McCormick, A. B.

LATIN

Hazel Elizabeth Hyatt, A. B. (Western Reserve)
Elsie Blanch Meeks, A. B. (Indiana)

GERMANIC LANGUAGES

Cora Elizabeth Stager, A. B.
Mary Sherburne Tower, A. B.

ENGLISH

Cora Era Chamberlain, A. B.
Italia Evans Flaus, A. B.
Muriel Vida Has Brauck James, A. B. (Michigan)

EDUCATION

James Garfield Bayley, A. B.
Albert Cobert, A. B.
Edward Jordan, B. S. (University of Sydney)
James Reed Young, A. B.

HISTORY

Letitia Marcelia Clark, A. B.
William Edward Dunn, A. B. (Texas)
*Wilhelmina Macartney Guérard, B. L. (Denver)
Stella McAllister, A. B.

ECONOMICS AND SOCIAL SCIENCE

Leon Ardzrooni, A. B.
Lewis Vincell Boyle, Jr., A. B.

PHYSICS

Perley Ason Ross, A. B.

CHEMISTRY

Walter Dale Forbes, A. B.

BOTANY

*Charles Shoemaker Morris, A. B.
Jessie Perkins Rose, A. B.

ZOOLOGY

Eleanor Anna Foshay, A. B.

GEOLOGY

Hugo Edmund Kramm, A. B.

ENGINEER

MINING

Arthur Fay Taggart, A. B.

MECHANICAL ENGINEERING

Herbert Earnest Fuqua, A. B.

JURIS DOCTOR

Sydney Joseph Frank, A. B. (Yale)
Egerton Drew Lakin, A. B.
Robert Bivins Murphey, A. B.
Spurgeon Domville Stewart, Ph. B. (Hamline)

DOCTOR OF PHILOSOPHY

GREEK

*Rufus Town Stephenson, A. B. (Drury), A. M. (Yale)

GERMANIC PHILOLOGY

Bruno Boezinger, A. B., A. M. (Ft. Worth University)

LATIN

Ernest Whitney Martin, A. B. (Chicago), A. M.

HISTORY

Payson Jackson Treat, A. B. (Wesleyan), A. M. (Columbia)

GEOLOGY

Solon Shedd, A. B., A. M.

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Museum: Davis, Eells, Stow, Stanford, Reid.
Rules: Davis, Leib, Miller, Crothers.
Library: Lathrop, Grant, Babcock, Gray, Stanford.
Memorial Church: Lathrop, Sloss, Leib, Reid, Gray.

THE UNIVERSITY

[Office and office hours in parentheses]

President: David Starr Jordan. (111, 11-12, 2-3.)

Vice-President: John Casper Branner. (332, 8-12, 2-5.)

Registrar: Orrin Leslie Elliott. (117, 8:15-12:15, 1:30-4:30, Saturday 9-12:15.)

Librarian: George Thomas Clark. (Library, 8:30-12:30, 1:30-4:30.)

Academic Secretary: George Archibald Clark. (112, 8:30-12, 2:30-5.)

Dean of Women: Evelyn Wight Allan. (203, M. T. F., 1:30-3:30; Thursdays, 3-6, 8-10, at 31 Salvatierra St.)

Student Adviser: Almon Edward Roth. (265, 11:15-12:15, 1:30-3:30, S. 9-10.)

THE DEPARTMENTS

[(1) Executive Head; (2) Secretary of Department Faculty]

Greek: Augustus Taber Murray.

Latin: Jefferson Elmore*; Benjamin Oliver Foster.

Germanic Languages: George Hempl, James Owen Griffin.

Romanic Languages: Oliver Martin Johnston*; Clifford Gilmore Allen.

English Literature and Rhetoric: Alphonso Gerald Newcomer; William Dinsmore Briggs.

English Philology: Ewald Flügel.

Philosophy: Henry Waldgrave Stuart.

Psychology: Frank Angell.

Education: Percy Erwin Davidson.*

History: Ephraim Douglass Adams; Percy Alvin Martin.

Economics and Social Science: Albert Conser Whitaker*; Ira Brown Cross.

Law: Frederic Campbell Woodward; Charles Andrews Huston.

Graphic Art: Arthur Bridgman Clark*; Robert Bartholow Harshe.

Mathematics: Robert Edgar Allardice; Hans Frederik Blichfeldt.

Applied Mathematics: Leander Miller Hoskins.

Physics: Fernando Sanford; Perley Ason Ross.

Chemistry: Lionel Remond Lenox*; William Henry Sloan.

Botany: Douglas Houghton Campbell; George James Peirce.

Systematic Botany: LeRoy Abrams.*

Physiology and Histology: Oliver Peebles Jenkins; Clara S. Stoltenberg.

Hygiene: Royce Reed Long.*

Zoology: Charles Henry Gilbert; John Otterbein Snyder.

Entomology and Bionomics: Vernon Lyman Kellogg.

Geology and Mining: John Casper Branner.

*Acting.

Civil Engineering: Charles David Marx; Charles Benjamin Wing.
Mechanical Engineering: William Frederick Durand; William Rankine Eckart.
Electrical Engineering: Harris Joseph Ryan; Samuel Barclay Charters, Jr.
Medicine: Ray Lyman Wilbur; Emmet Rixford.
Anatomy: Arthur William Meyer.
Bacteriology: Hans Zinsser.
Pharmacology: Albert Cornelius Crawford.

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1. **Student Affairs:** A. B. Clark, Elliott, McFarland, Stuart, E. W. Martin.
2. **Athletics:** Angell, Howard, E. W. Martin, Wing, Adams.
3. **Public Exercises:** Krehbiel, Howard, Bassett, Guérard, Treat.
4. **Literary Contests:** Alden, Bassett, Huston, Treat, Foster.
5. **Public Health:** Gilbert, Meyer, Mitchell, Zinsser, Stoltenberg.
6. **Delinquent Scholarship:** Gilbert, Elliott, Murray, Hoskins, Whitaker, Woodward.
7. **Public Entertainments:** S. W. Young, C. D. Marx, G. H. Marx, Peirce, Searles.

Academic Committees

1. **Executive Committee:** Alden, Branner, Cubberley, Elliott, Franklin, Green, Heath, Hempl, Jordan, G. H. Marx, Peirce, Wing, Woodward.
2. **Admission and Advanced Standing:** Elliott, Cubberley, Millis, Ryan, Searles.
3. **Registration:** Elliott, E. W. Martin, Moreno, Snyder, Stoltenberg.
4. **Graduation:** Elliott, Fish, Hohfeld, Jenkins, Johnston.
5. **Schedule and Examinations:** Elliott, Elmore, Huston, F. J. Rogers, Skinner.
6. **Graduate Study:** Franklin, Bolton, Flügel, Hempl, Heath.
7. **Library:** Stillman, C. D. Marx, Kellogg, Murray, Adams.
8. **University Publications:** Kellogg, Hoskins, Townley, Hempl, Show.
9. **Recommendation of Teachers:** Elliott, Cooper, Cubberley, Davidson, Sanford.

FACULTY AND OTHER OFFICERS

[Name; title; office; office hour; residence; post-office. Post-office in all cases *Stanford University* except where university residence is followed by initial letter of town ('P' indicates *Palo Alto* post-office; 'Mayfield, M,' *Mayfield* post-office; etc.). Street address *Palo Alto* or *Campus* unless otherwise named. Members of the Academic Council are indicated by SMALL CAPS.

'Daily' does not include Saturday. Office hours are daily unless otherwise noted. Brackets indicate 'absent on leave'; the dagger (†) marks the names of men who are married.]

The superior number [1] indicates first semester; [2] indicates second semester.

†ABRAMS, L. R., Asst. Prof. Botany, (471, T. Th. 2-4) 2 Salvatierra
†ADAMS, E. D., Prof. Hist.,
(230, T. Th. 11:15-11:45, W. 2-2:30) 9 Alvarado.
†ALDEN, R. M., Assoc. Prof. Engl. Lit.,
209, M. W., 9:15-10:15) 427 Embarcadero P
Allan, (Mrs.) E. W., Dean of Women, (203, M. T. F. 1:30-3:30;
Th. 3-6, 8-10, at 31 Salvatierra) 31 Salvatierra
ALLARDICE, R. E., Prof. Math., (70, 10:15-11:15) 19 Salvatierra
ALLEN, C. G., Asst. Prof. Rom. Lang.,
(245, M. W. F. 9:15, T. Th. 3:30) 19 Alvarado
Anderson, F. P., Asst. Rom. Lang., 37 Salvatierra
†ANDERSON, M. B., Prof. Engl. Lit., Emeritus, Menlo Park
†ANGELL, F., Prof. Psychol., (399, T. Th. 2-3) 1200 Bryant
Armstrong, J. W., Asst. App. Math., 255 Lytton P
Ayers, M. C., Asst. App. Math., 859 Lytton P
†BAHNEY, L. W., Asst. Prof. Metallurgy, (560, 9:30-4:30) 1080 Emerson
†Barkan, A., Prof. Eye, Ear and Larnyx, Butler Bldg., San Francisco S
†BASSETT, L. E., Asst. Prof. English,
(212, M. W. F., 11:15) 9 Cabrillo Ave.
[2]Beach, F. H., Asst. to Registrar, 626 Gilman P
Bennett, (Mrs.) M. B., Asst. Library, 15 Salvatierra
Benson, C. H., Asst. Mech. Eng., 116 Encina
†Bentley, R. C., Asst. Prof. Education (52, 9:15) 315 Melville P
Berry, S. S., Asst. Zoology, 79 Encina
†BINGHAM, J. W., Assoc. Prof. Law,
(6, M. W. F. 11:15-12) 334 Lincoln P
Black, S. L., Asst. Library, 193 Encina
[1]Blee, C. E., Asst. Civ. Eng., 214 Emerson P

Bliven, B. O., Asst. English, 154 Encina
Blichfeldt, H. F., Assoc. Prof. Math., (74, 11:15-11:45) College Terrace
Bly, E. P., Asst. App. Math., 40 Encina
†Boezinger, B., Instr. German, (32, M. W. F., 10:15) 176 Bryant P
Boezinger, (Mrs.) S., Asst. Rom. Lang., 176 Bryant P
Bohart, G. S., Asst. Chem., 191 Encina
[Bolton, (Miss) F., Acting Instr. Hygiene.]
†Bolton, H. E., Prof. Amer. Hist., (235, M. 10:15-10:45, Th. 2-2:30) 1010 Bryant
†Bonnell, J. K., Instr. English, (211, M. T., 9:15) 904 Cowper P
[2]Borden, A. D., Asst. Sys. Bot., 718 Bryant P
Boyle, L. V., Asst. Economics, 156 Encina
[1]Brady, E. W., Asst. Pharmacology, 158 Encina
†Branner, J. C., Vice-Pres. and Prof. Geology, (332, 8-12, 2-5) 13 Alvarado
†Briggs, W. D., Asst. Prof. English, (207b, T. 2:30, Th. 9:45) 943 Bryant P
Bristol, (Miss) S. B., Appointment Secretary, 1155 Ramona
Brooks, (Miss) L. M., Asst. Library, Box 354, San Jose
Brown, (Miss) M., Asst. Library, 11 Roble
[†Brown, J. G., Asst. Prof. Physics, Cambridge, Mass.]
Bubb, J. B., Asst. Mech. Eng., 731 Hamilton P
Buckingham, (Miss) E. L., Asst. English, 659 Melville P
Buehrer, G. C., Organist, (68, M. 4:30, T. 11:15-4:30, 7:30, Th. 4:30) 169 Waverley
Burbank, L., Lecturer Bionomics, Santa Rosa
Burbridge, H. C., Asst. App. Math., 301 Kipling P
†Burlingame, L. L., Asst. Prof. Botany, (429, M. T. Th. F. 11:15-11:45) 20 Alvarado Row
Campbell, D. H., Prof. Botany, (468) 19 Salvatierra
†Cannon, H. L., Asst. Prof. Hist., (M. W. F. 11:25-12:25, T. Th. 10:15-11:15) 19 Alvarado
[2]Cary, E. G., Asst. Medicine, 158 Encina
Caswell, A. E., Asst. Physics, 9 S. Lincoln, San Jose S
†Cathcart, A. M., Prof. Law, (7, M. T. W. Th., 2:45-3:30) 1001 Ramona P
†Charters, S. B., Jr., Asst. Prof. Elec. Eng., (507, M. T. W. Th. F. 1:30-4:30) Encina
†Cheney, W. F., Clinical Prof. Diseases Digestive System, Shreve Bldg., San Francisco S

†Clark, A. B., Assoc. Prof. Graphic Art, (314, 9:15-10:15) 4 Cabrillo
†Clark, G. A., Academic Secretary, (112, 8:30-12, 2:30-5) 7 Alvarado
†Clark, G. T., Librarian, (Lib., 8:30-12:30, 1:30-4:30) Menlo Heights
²Cleveland, (Miss) M., Asst. Roble Gym., 15 Lasuen
†Clevenger, G. H., Asst. Prof. Metallurgy,
(560, 2-4) 381 Hawthorne P
†Cooper, W. A., Assoc. Prof. German, (35, T. Th. 9:15) 35 Salvatierra
†Coover, J. E., Asst. Psych., University Park
Corbaley, F. E., Asst. Elec. Eng., 9 Salvatierra
Cottrell, J. P., Asst. Library, 24 Encina
Coulter, (Miss) E. M., Asst. Library, 5 Salvatierra
Cramer, T. M., Asst. Chemistry, 675 Channing P
†Crawford, A. C., Prof. Pharmacology, 523 Webster
Crawford, J. P., Asst. Hygiene, 119 Encina
†Cross, C. N., Instr. Mech. Eng., (504 1:30-4:30) 340 Embarcadero P
Cross, I. B., Instr. Economics, (220 M. W. F. 10:15-11:15) 106 Encina
²Cross, R. J., Asst. Chem., Mayfield
[†Cubberley, E. P. Prof. Educ., Cambridge, Mass.]
†Cutter, L. E., Instr. Mech. Eng.,
(274, M., T. 1:30-4:30, T. Th. 8:15-12:15) 627 Webster P
Dailey, M. E., Lecturer in Education, San Jose
†Davidson, P. E., Asst. Prof. Educ.,
(53, T. Th. 11:15) University Park
Davis, (Miss) E. G., Asst. Hyg., 660 Waverley P
†Doane, R. W., Asst. Prof. Entomology, (434, 8:15-12:15) 527 Homer P
²Draper, R. L., Asst. Phyl. 38 Encina
†Drew, E. R., Asst. Prof. Physics,
(384, M. W. F., 10:15-11:15) 1321 Waverley P
Dudley, W. R., Prof. Systematic Botany, Emeritus, Univ. Ave.
Duffus, R. L., Asst. Hist., 515 Waverley
Dunn, W. E., Asst. History, 417 Emerson
†Durand, W. F., Prof. Mech. Eng., (260, 11:15-12:15) 2 San Juan
†Eckart, W. R. Jr., Assoc. Prof. Mech. Eng.,
(503, 1:30-4:30) 1125 Ramona P
†Ellenwood, F. O., Instr. Mech. Eng., (509, 1:30-4:30) Evergreen Park
²Elliott, J. E., Asst. Civ. Eng., 185 Encina
Elliott, L. D., Asst. Chem., 20 Encina
†Elliott, O. L., Registrar, (117, 9-12, 2-4:30, S. 9-12) 5 Cabrillo
†Elmore, J., Assoc. Prof. Latin,
(22, M. W. F. 11:15-12, F. 2-2:30) 1134 Emerson
Endres, H., Asst. Civ. Eng., 147 Encina

†Espinosa, A. M., Asst. Prof. Spanish,
(245, Th. 11:15-12) 643 Webster
Evenden, E. S., Asst. Education, 117 Encina
†Ewell, E. R., Asst. Chemistry, 623 Middlefield P
[†Fairclough, H. R., Prof. Latin, In Europe]
Field, (Miss) A. R., Asst. Pres. Office, 59 Roble
†Fish, J. C. L., Prof. Railroad Eng.,
(269, M. 1:30-4:30, T. Th. 10:15-12) 1101 Emerson P
Fisher, W. K., Asst. Prof. Zoology,
(441, M. W. F. 11:15) 1525 Waverley P
†Flügel, E., Prof. Eng. Philology, (212, M. T. Th. 1:30) 1153 Cowper
†Folsom, D. M., Asst. Prof. Mining, (337, 9-12, 2-4) 1240 Waverley
†Foss, J. H., Instr. Civil Eng., (269, M. W. F. 10:15) 251 Emerson P
†Foster, B. O., Asst. Prof. Latin, (22, M. 9:15) 3 Salvatierra
†Franklin, E. C., Prof. Chemistry, (35c) 1057 Ramona P
Franklin, (Miss) M., Asst. Library, 1 Santa Inez
Fulkerson, C. H., Asst. Hygiene, 2 Lasuen
[1]Fullaway, D. T., Asst. Entomology, Campbell
†Gardner, D. C., Chaplain, (Vestry, T. W. Th. F. 9-12) 1a Alvarado
Gibbons, H. Jr., Prof. Obstetrics, 350 Post, San Francisco S
†Gilbert, C. H., Prof. Zoology, (443, 2-3) 433 Melville
†Goodwin, J. E., Asst. Librarian, (8-12, 1-4) 11 Alvarado
†Gray, H. D., Asst. Prof. Eng.,
(208, M. 2, W. F. 10) 915 Channing P
†Green, R. L., Prof. Math., (71, 11:15-12:15) 13 Salvatierra
†Griffin, J. O., Prof. German, (35, 10:15) 14 Alvarado
†Guèrard, A. L., Asst. Prof. Rom. Lang.,
(245, T. Th. 9:15) 37 Salvatierra
Guèrard, C. A., Instr. Rom. Lang.,
(245, M. W. F. 10:15) Univ. Hotel P
Hackett, C. W., Asst. History, 417 Emerson
Hadden, (Miss) E., Asst. Library, 1157 Ramona P
[2]Halcombe, N. M., Asst. Civ. Eng., Encina
Hall, (Miss) A. G., Asst. Library, 628 Gilman P
[†Hall, H. J., Asst. Prof. Engl., In Europe]
Hanna, (Miss) J. R., Asst. History, 15 Lasuen
†Harcourt, R. H., Instr. Mech. Eng., (Forge, 8:15-4:30) 559 Everett P
†Harshe, R. B., Asst. Prof. Graphic Art.,
(314, M. T. W. 3:30-4:30) 7 Salvatierra
Hatfield, G. J., Asst. Econ., 120 Encina
Havens, M. C., Asst. Mechanician, (8-5) 465 Hamilton P

[1]Hawes, B. M., Asst. Hygiene, 173 Encina
Haxo, H., Asst. Rom. Lang., 327 Emerson P
Hays, (Miss) A. N., Classifier Library, 3 Alvarado
†Heath, H., Prof. Zoology, (436, 11:30) 1147 Ramona P
†Hempl, G., Prof. Germanic Philol.,
(32, M. W. F. 9:15, Th. 2:30) 8 Cabrillo
Hillebrand, W. A., Asst. Prof. Elec. Eng.,
(506, 10:15-12:15) 159 Encina
†Hilmer, H., Instr. German, (35, M. 11:15) 243 Cowper P
Hilmer, (Mrs.) N., Asst. German, 243 Cowper P
Hilton, F. H., Asst. Hygiene, 10 Salvatierra
Hine, T. B., Act. Instr. Chem., (24c, 1:30-4) 130 Encina
†Hirschfelder, J. O., Prof. Clinical Medicine, 1392 Geary, San Francisco S
Hohfeld, W. N., Prof. Law, (4, M. W. 10:15-11:15) 625 Forest P
†Hoskins, L. M., Prof. Applied Math.,
(275, 11:30-12) 365 Lincoln P
†Howard, B. E., Prof. Pol. Science, (223, M. W. F. 11:15) 12 Dolores
†Huffcrich, C. H., Prof. Law,
(1, T. W. Th. F., 10:15) 706 Foxcroft Bldg., San Francisco S
[1]Hughes, R. L., Asst. Civ. Eng., Pine Cottage
†Huston, C. A., Assoc. Prof. Law,
(2, T. W. Th. F. 2-2:30) 1048 Ramona P
Hyatt, (Miss) S., Asst. Physics; Matron Roble Hall, Roble
James, (Miss) F. S. C., Asst. Library,
"The Knickerbocker," San Francisco
†Jenkins, O. P., Prof. Physiol. and Histol., (482) 3 Lasuen
Jesson, R. H., Asst. Hygiene, 70 Encina
Johnson, J. R., Asst. Physics, R. D. 21, San Jose
†Johnston, O. M., Assoc. Prof. Rom. Lang.,
(242, M. T. Th. 9:15, M. T. W. 3:30) 4 Alvarado
Jolivette, (Miss) H. D. M., Asst. Botany, 16 Alvarado
†Jordan, D. S., President, (111, 11-12, 2-3) Xazmin Hs., Serra Ave.
Keefer, C. T., Asst. Mech. Eng., 949 Emerson P
Keen, (Miss) S., Asst. Dept. Geol. and Min., (327) 1221 Webster P
†Kellogg, V. L., Prof. Entomol., (431, 11:30-12:15) 21 Salvatierra
[2]Knollin, E. R., Asst. Hygiene, 194 Encina
Knowlton, P. A., Instr. Latin, (22, M. F. 11-11:25) 20 Lasuen
†Krehbiel, E. B., Assoc. Prof. Hist., (230, Th. F., 10:15) 29 Salvatierra
L'Anphere, (Miss) M., Asst. Roble Gym., 481 University
[Lathrop, (Miss) H., Asst. Library, 604 Gilman]
†Lenox, L. R., Prof. Anal. Chem., (40c, 2:30-4:30) San Francisco Road

†Lesley, E. P., Asst. Prof. Mech. Eng., (266, 9:15) 22 Alvarado
Lhamon, R. M., Instr. Anatomy, 1001 Ramona P
†Liggett, J. B., Instr. Foundry, (8:15-12:15, 1:30-4:30) 445 Forest P
†Long, R. R., Asst. Prof. Phys. Training,
(95, T. Th. F. 1:30-2:30) 853 Channing P
McCann, E. G., Asst. Elec. Eng. 44 Encina
McCracken, (Miss) M. I., Asst. Prof. Entomology,
(433, 8:30-12:15) 5 Salvatierra
McCurdy, (Miss) N. W., Asst. History, 411 Waverley P
†McDowell, J. E., Asst. Registrar, (120, 8:15-4:30) 10 Cabrillo
McEwen, G. F., Instr. Applied Math.,
(40, M. W. F. 9:15-11:15, T. Th. 10:15-11:15) 660 Homer P
†McFarland, F. M., Prof. Histology,
(480, T. Th., 9:15-12:15, M. T. W. 1:30-4:30) 943 Scott P
†McMillan, W. B., Asst. Civ. Eng., 15 Alvarado
†McMurphy, J. I. W., Acting Instr. Syst. Botany,
(471, 8:15-12:15, T. W. Th. 1:30-4) 341 Columbia, College Terrace
†Maloney, H. W., Instr. Physical Training,
(Gym., 10-12, 4-6) 176 Waverley P
Mann, W. M., Asst. Entomology, 19 Lasuen
[†Manning, W. A., Asst. Prof. Appl. Math., In Europe]
†Martin, E. W., Asst. Prof. Greek and Latin,
(25, M. W. 1-1:30) 525 Lincoln P
Martin, (Miss) L. J., Assoc. Prof. Psychology,
(401, T. Th. 4) 15 Salvatierra
Martin, P. A., Instr. European Hist.,
(215, T. 2-2:30, F. 9:15-9:45) 22 Alvarado
Martin, T. P., Asst. Library, 567 Lincoln
†Marx, C. D., Prof. Civil Eng., (271, 8:25-9:25) 357 Kingsley
†Marx, G. H., Prof. Mech. Eng., (274, 9:15) 356 Lincoln
*†Matzke, J. E., Prof. Rom. Lang.,
Meinhart, A., Asst. Bactericlogy, 401 Lowell P
†Meyer, A. W., Prof. Anatomy,
(Mus. Lab. M. W., 1:30-2) 1116 Ramona P
†Millis, H. A., Assoc. Prof. Economics,
(221, M. W. F. 10-10:25) 751 Channing P
Millsap, R. E., Asst. Civ. Eng., 147 Encina
Millspaugh, (Miss) W., Asst. History, 15 Lasuen
Mirricleos, (Miss) E. R., Instr. English, (209a W. F. 11:15) Madroño
†Mitchell, J. P., Asst. Prof. Chem., (5c, 2-4) 235 Embarcadero

* Died September 18, 1910.

†Mitchell, S. B., Asst. Library, 9 Salvatierra
Mobley, (Miss) B. J., Asst. Library, 619 Webster P
Moffit, G. W., Asst. Physics., 549 Cowper P
[2]†Moore, A. W., Act. Prof. Phil., (417, F. 10:30-11:15) 12 Cabrillo
Moreno, H. C., Assoc. Prof. Applied Math.,
(40, 11:15-11:30) 1235 Webster
†Moser, C., Instr. Civ. Eng., (273, M. Th. F. 1:30-4:30) 651 Homer P
Mosher, (Dr.) C. D., (Acting Med. Adviser to Women, Director
Roble Gym., 95, 1:30) 1094 Emerson P
†Murray, A. T., Prof. Greek, (25, M. W. 10:30-11:15) 1019 Bryant
[2]Myer, A. H., Asst. Chem., 161 Encina
†Newcomer, A. G., Prof. English,
(209, T. Th., 10:15, Th., 3:45) 1015 Forest Court P
[2]Newcomer, E. J., Asst. Entom., 20 Encina
Newman, O. W., Asst. Library, 92 Encina
Ophüls, (Miss) L., Asst. Library, 15 Salvatierra
†Ophüls, W., Prof. Pathology, 114 Walnut, San Francisco S
Orange, V. C., Asst. Mech. Eng., 349 Kipling P
†Palmateer, T. J., Instr. Machine Shop, (8:15-4:30) Mayfield, M
Park, (Miss) H., Asst. Graphic Art, 40 Roble
Park, C. V., Asst. Library, 225 Homer P
Parsons, M. G., Asst. Civ. Eng., 159 Encina
Partridge, J. S., Lecturer in Law, Flood Building, San Francisco
[†Peirce, G. J., Prof. Botany, Madison, Wis.]
[2]Pemberton, C. E., Asst. Entom., San Francisco
[1]Pemberton, J. R., Instr. Geol., 19 Lasuen
Perdew, W. E., Asst. Chemistry, 36 Encina
†Peterson, H. C., Curator Museum, 672 Homer P
[1]Post, F. D., Asst. to Registrar, 191 Encina
Post, (Miss) M. A., Asst. to Registrar, 1112 Ramona P
†Ponzer, E. W., Asst. Prof. Applied Math.,
(40, T. Th., 9:15) 188 Bryant P
[†Price, G. C., Prof. Zool., Cambridge, Mass.]
Pruett, J. F., Asst. Physiology, 180 Encina
Randall, (Miss) J. L. D., Asst. Hygiene and Sys. Botany, 5 Alvarado
Randall, (Miss) W. R. D., Act. Instr. Hygiene, 21 Lasuen
[2]Rankin, (Miss) F. B., Asst. Hist., Madroño
†Rendtorff, K. G., Assoc. Prof. German,
(32, T. 9:30-10:30, W. 4:30-5:30) 1130 Bryant F
Rible, (Miss) B., Asst. Greek, 62 Roble
Rible, (Miss) L. M., Asst. English, 68 Roble
[1]Rich, W. H., Asst. Zoology, 249 Kipling

†Rixford, E., Prof. Surgery, 1795 California, San Francisco S
Robertson, (Miss) R., Asst. History, Redwood City R
†Rogers, A. F., Assoc. Prof. Mineralogy, (362, 10:15) 1047 Ramona P
†Rogers, F. J., Assoc. Prof. Physics, (381) 4 Lasuen
Ross, P. A., Instr. Physics, (387) College Terrace
Roth, A. E., Student Adviser,
(265, 11:15-12:15, 1:30-3:30, S. 9-10) 105 Encina
Rossiter, (Miss) M., Asst. Library, 15 Lasuen
[2]Russell, F. M., Asst. Econ. 10 Salvatierra
Russell, (Mrs.) T. P., Instr. English, (206, T. Th. 8:30-9) 659 Melville P
†Ryan, H. J., Prof. Elec. Eng., (545, 10:15-11:15) 9 Santa Inez
[†Sabine, G. H., Asst. Prof. Philosophy, Ithaca, N. Y.]
Sanborn, R. E., Asst. Chemistry, 12 Salvatierra
Sandstrom, A. C., Asst. Civ. Eng., 255 Lytton P
†Sanford, F., Prof. Physics, (382) 450 Kingsley
Schaupp, K. L., Asst. Physiology, 17 Alvarado
Schwennesen, A. F., Act. Instr. Mining, 10 Encina
†Searles, C., Assoc. Prof. Rom. Lang.,
(M. W. F. 9:15, W. 11:15) 1027 Emerson P
Sears, H. J., Asst. Chemistry, 194 Encina
[Seward, S. S. Jr., Asst. Prof. Engl., In Europe]
Shaw, S. B., Asst. Civ. Eng., 65 Encina
Short, (Miss) F. E., Asst. Education, (56, 9-12, 1:30-5) 555 Lytton P
†Show, A. B., Prof. Europ. Hist.,
(230, M. W. F. 10:15-11) College Terrace
†Skinner, M. M., Asst. Prof. German,
(32, T. 10:15-11:15) 10 Alvarado
†Sloan, W. H., Instr. Chemistry, (49c, 1:30-4:30) Alta Mesa P
[†Slonaker, J. R., Asst. Prof. Physiology, Cambridge, Mass.]
†Smith, E. W., Instr. English,
(207a, M. 9:15-10:15, T. 10:15-11:15) 380 Kingsley P
†Smith, J. P., Prof. Mineral. and Paleon.,
(329, 1:30-4:30) 1335 Cowper P
Smothers, A. E., Asst. App. Math., 181 Encina
Snell, T. W., Asst. Elec. Eng., 44 Encina
[†Snow, W. F., Assoc. Prof. Hygiene, Sacramento]
†Snyder, J. O., Asst. Prof. Zool., (423, 1:30-4:30) 1345 Cowper
Spencer, (Miss) E. J., Asst. Latin, (22, 9:15 9:25) 233 Addison P
Spooner, (Miss) G., Asst. Bacteriology, 381 Lincoln P
†Stanley, E. J., Instr. Woodworking, (500) 269 Hawthorne P

Starks, (Mrs.) C. L., Instr. Graphic Art., (Studio, T. W. Th. F. 1:30-4:30) 1115 Ramona
†Starks, E. C., Asst. Prof. Zoology, (426, 1:30-4:30) 1115 Ramona
Steck, L. G., Asst. Sys. Bot., Encina
[2]Stidston, R. O., Asst. English, 757 Homer P
[†Stillman, J. M., Prof. Chem., In Europe]
†Stillman, S., Prof. Surgery, 2336 Broadway, San Francisco S
Stinson, (Miss) S. D., Asst. Library, 649 Lytton P
[1]Stolle, F., Asst. Anatomy, 683 Hamilton P
Stoltenberg, (Miss) C. S., Asst. Prof. Physiology, (485, M. W. 9:15-12:15, Th. F. 1:30-4:30) 7 Alvarado
†Stuart, H. W., Prof. Philosophy, (416, M. 11:30-12, T. Th. 10:30-12) 8 Alvarado
Stuart, (Miss) M. V., Asst. Math., 6 Roble
Sutliff, (Miss) H. B., Chief Cataloguer Library, 15 Salvatierra
†Swain, R. E., Assoc. Prof. Chem., 33c, 2-4:30) 638 Channing P
[1]Taylor, N., Asst. Civ. Eng., 6 Lasuen
[2]Templeton, E. C., Instr. Geol., 375 Everett P
Tennant, H. M., Asst. Library, Faculty Club Hs.
†Terman, L. M., Asst. Prof. Educ., (52, 2:30-3) University Park
Theile, W. C., Asst. Dept. Mech. Eng., 8 Salvatierra
Thompson, (Miss) D., Asst. Library, 1 Santa Inez
Thompson, W. F., Asst. Bionomics, Encina
Todd, (Miss) H. L., Asst. Library, 835 Waverley P
Topham, J. S., Asst. Library, 4 Salvatierra
†Townley, S. D., Assoc. Prof. Applied Math., (45, T. Th. 11:15-12) 33 Salvatierra
†Treat, P. J., Asst. Prof. Hist., (230, M. W. 11-11:25, T. Th. 10:25-11) 27 Salvatierra
†Uhlman, W., Engineer, 420 Emerson P
[2]Vaugh, R. M., Asst. Civ. Eng., 359 Emerson P
Waldraff, P. H., Act. Instr. Chemistry, 118 Encina
Waynick, (Mrs.) E. W., Asst. Hygiene, 7 Lasuen
Weymouth, F. W., Asst. Physiology, 32 Encina
†Whitaker, A. C., Assoc. Prof. Econ., (222, 9:15-9:25, 10:15-10:30) 21 Alvarado
Wiggins, J. H., Asst. Hygiene, 70 Encina
†Wilbur, R. L., Prof. Medicine, (482, T. 8:30-9:30) 1211 Bryant P
†Wing, C. B., Prof. Struct. Eng., (278, M. W. F. 10:15) 345 Lincoln P
Wood, F. B., Asst. Pres. Office, 1757 Waverley P
Woodhead, (Miss) F., Asst. Philosophy, 6 Alvarado
Woodruff, (Miss) M. J., Stenog., Library, Mountain View

†Woodward, F. C., Prof. Law, (3, 2-2:30) 2 Salvatierra
[†Young, A. A., Prof. Econ., Cambridge, Mass.]
†Young, S. W., Prof. Physical Chem.,
(46c, 9:30-12, 2-5) Bryant and Tennyson P
²Youse, (Miss L., Asst. Sys. Bot., 627 Waverley P
†Zinsser, H., Assoc. Prof. Bacteriol., (Mus. Lab., 9-11) 401 Lowell P

BUSINESS OFFICE

Ames, E. M., Voucher Clerk.....19 Lasuen
Bain, A. J., Supt. Construction.....1106 Ramona
Beebe, H. W., Office Manager.....531 Lytton
Blodgett, D. P., Bookkeeper.....268 Homer
Flannery, F., Clerk.....Stanford University
Hadden, (Miss) F., Stenographer.....1157 Ramona St.
Knight, Allen, Auditor.....502 California St., S. F.
Lathrop, C. G., Treasurer and Business Manager.....Alta Vista
Monasch, D., Purchasing Agent.....Union Trust Building, S. F.
Rich, S. H., Cashier.....3180 Washington St., S. F.
Peters, C. R., Storekeeper.....Stanford University
Dorgan, M. H., Foreman Plumber.....Mayfield
Freedman, S., Foreman.....Mayfield
Hixson, M. C., Foreman Electrician.....942 Scott St.
Joy, R., Chief Engineer.....942 Scott St.
Miller, C. F., Chief Gardener.....315 Lytton Ave.
Quinn, A. A., Clerk Encina.....Palo Alto
Scott, T. B., Storekeeper of Chemical Laboratory.....Mayfield
Schilling, J. C., Foreman Carpenter.....529 Addison
Smith, G. B., Foreman Painter.....751 Ramona
Stevens, F. A., Foreman Mechanician Shop.....430 Tasso St.
Witherell, J. S., Farm Superintendent.....Stanford University

STUDENTS

Name; home residence; major subject; status; University residence; post-office. Post-office in all cases *Stanford University* except where university residence is followed by initial letter of town ('P' indicates *Palo Alto* post-office; 'Mayfield, M.' *Mayfield* post-office; etc.) Street address *Palo Alto* or *Campus* unless otherwise named.

Status—gr., graduate student; sp., special student. The figures after major subject indicate the number of units of university work completed (and counting toward the 120 units required for graduation), no account being taken of 'deferred,' 'incomplete,' or 'conditioned' work. The dagger (†) indicates unadjusted standing from other colleges and universities. (Phys.-Physics; Phyl.-Physiology.)

The superior number [1] prefixed to the name of a student indicates registration for the first semester only; [2] indicates second semester only.

Abbott, Helen Stewart : Salinas, Graph. 29, 17 Roble
[1]Abbott, Kenneth Wheelock : Alameda, Bot. 39, 359 Emerson
Abel, Edson Cronk : Whittier, Pre. L. 74, 183 Encina
[1]Acheson, Mary : Belfast, Ireland, Germ. gr., College Terrace
A. B., Royal University of Ireland, 1892; A. M., Stanford, 1911.
Achi, William Charles K. : Honolulu, T. H., Pre L. 25, 645 Lytton
Acker, Frank V. : San Francisco, C. E. sp. 106, 36 Encina
Ackerman, Robert Louis : San Francisco, Pre L. 10, 37 Encina
Ackerman, Ruth Lovilla : Los Angeles, Hist., 14 Salvatierra
Adam, Edward Niles : Melville, Mont., E. E. 84, 318 Emerson P
Adams, Robert Gemmell : Oakland, C. E. 8, Beta Theta Pi
Adcock, Robert Glover : Salinas, C. E. 14, 102 Encina
Akahoshi, Ichiji Miyata : Oakland, Econ. 41, Japanese Club
Akins, Charles Frederic : Redlands, C. E. 111, 39 Encina
Albright, Elwood M. : Albuquerque, N. M., Engl. 26, 49 Encina
[2]Alderman, Merle Norton : Corona, Econ. †, 5 Lasuen
Alderton, Dorothy M. : Brooklyn, N. Y., Germ. 58, Pi Beta Phi
Allen, Anais Julia : So. Pasadena, Engl. 105, 17 Salvatierra
[1]Allen, Beverly Sanders : Lincoln, Chem. 8, 359 Emerson P
[2]Allen, Florence Carol : Spokane, Wash., Graph. 10, 30 Madroño
Allen, Charles Lewis Jr. : So. Pasadena, Econ. † 12, 16 Salvatierra
Allen, Florence Elizabeth : Los Angeles, Engl. gr., 22 Lasuen
A. B., Stanford, 1911.
Allen, Nellie : Oakland, Hist. 68, Madroño
Allum, Ruth Alice Irene : Riverside, Graph. 10, 66 Roble
Ambrose, Arthur Warren : Lockeford, C. E. 52, 145 Encina

Amsden, Donna Hinds : Los Angeles, Engl. 44, Delta Gamma
Anderson, Frank Edward : Los Angeles, E. E. 47, 232 Lytton P
Anderson, Frederick P. : Grosse Ile, Mich., Frn. 111, 37 Salvatierra
Anderson, Laurel Edwin : Burlingame, Pre L. 12, Burlingame
Anderson, Robert Edwin : San Francisco, Geol. 47, Pine Cottage
Anderson, Willis A. : Roswell, N. M., Pre L. 4, 520 Lytton P
Andreen, Harry Mayo : Woodside, Geol. 42, 405 Emerson, R
Andresen, Ludwig Paul : Portland, Ore. Geol. 74, 102 Encina
Andrews, Jesse Lee : El Centro, Educ. 96, 179 Encina
Andrews, Rupert Burke : San Diego, E. E. 39, Kappa Alpha
Arakawa, Futoshi : Hilo, H. T., E. E. 22, Japanese Club
Arakawa, Santaro : San Diego, C. E. 107, Japanese Club
Argabrite, Clarence Cannon : Ventura, E. E. 65, 160 Encina
Argabrite, John Jay : Hayward, E. E. 68, 148 Encina
Argabrite, Walter Marion : Ventura, E. E. 36, 107 Encina
Armstrong, John W. : Fivemiletown, Ire., E. E. sp. 48, 255 Lytton P
Arrell, Dell Bernie : Moline, Ill. Geol. 118, Phi Gamma Delta
Arrell, James Lee : Moline, Ill., Econ. 30, Phi Gamma Delta
Ashley, Freeland Hightower : Altadena, Engl. gr., 567 Melville P
A. B., Stanford, 1910.
[1]Ashurst, Nora Smith : Mayfield, Hist. gr., Mayfield
A. B., Monmouth College, 1901.
[2]Atkinson, Arthur Garrett : Saratoga, C. E. 73, 1555 Emerson P
[1]Atkinson, Robert Orville : San Jose, Engl. † 17, 405 Kipling P
[1]Atwood, Mary Emily : Monrovia, Frn. 46, K. Alpha Theta
Avery, Harold Tolman : San Jose, C. E. 43, 260S.14th,S.Jose S
Avery, Louise : San Jose, Hist. 39, 260S.14th, S.Jose S
Ayers, Murray Chase : Pasadena, C. E. 106, 859 Lytton P
Bach, Ralph Emmett : San Diego, Pre L. 8, Delta Chi
Bagley, Flora : Burlingame, Lat. 73, Burlingame
Bahney, Luther William : Palo Alto, Geol. †, 1080 Emerson
Ph. G., University of California, 1897.
Bailey, Leslie Eugene : Escondido, M. E. sp. 51, 190 Encina
Bailey, Margery : Palo Alto, Engl. 13, 207 Hawthorne P
Baker, Lois : Los Angeles, Frn. 37, 11 Salvatierra
[1]Baker, Samuel Carleton : San Jose, Law sp. 22, 334 Cowper P
Baker, William Elliott : San Jose, Educ. 12, 371 S. 12, S. J. S
Ball, Bertrand Logan : Los Angeles, Econ. 102, Kappa Sigma
Ball, Carroll Doyle : San Jose, C. E. 78, 275 S. 9, S. J
Bangle, George Raymond : Vallejo, Econ. 33, Kappa Alpha
Banta, Earl Lott : Los Angeles, Econ. 107, 334 Cowper P
Bardin, Ethel Ora : Salinas, Graph. 43, 19 Roble

Bargar, Margaret Elizabeth : Los Angeles, B. S., Rockford College, 1894.	Engl. gr.,	156 Hamilton P
Barker, Anna Ruth : Palo Alto,	Math. 11,	219 Addison P
[1]Barker, Gem Lee : Palo Alto, A. B., Stanford, 1910.	Span. gr.,	131 Cowper P
[1]Barlow, Maybelle Bertha : Los Angeles, A. B., Stanford, 1911.	Hist. 120,	K. Alpha Theta
Barman, Waldemar Jacob : Los Angeles,	Pre L. 8,	Vining Bldg. P
Barnes, Gladys Wolcott : San Francisco, A. B., Stanford, 1911.	Engl. gr.,	3 Roble
[2]Barnett, Clarence Baily : Long Beach,	Econ.,	Delta Tau Delta
Barnett, Elmo Grady : Long Beach,	Pre L. 5,	Delta Tau Delta
[1]Barnhart, Frank Dyckman Cobb : Coyote,	Phyl. 10,	Phi Kappa Psi
[1]Barrow, Frank Elliott : Los Angeles,	Pre L. 48,	19 Encina
Barry, George Long : San Jose,	Phyl. 7,	196 Encina
[2]Barry, Katherine Elizabeth : San Jose,	Engl. 76,	116AMinn.Av.SJS
Barshinger, Byron Walter : Gilroy,	Phyl. 9,	100 Encina
[1]Bartlett, Raymond Sumner : Palo Alto,	Engl.,	840 Guinda P
Bassett, Maude Helene : Los Angeles,	Hist. 89,	Gamma Phi Beta
Bassett, Winona : Pasadena,	Engl. 12,	Pi Beta Phi
Batcheller, Helen May : Los Angeles,	Hist. 10,	Gamma Phi Beta
Baugh, Lucile Sumners : San Jose,	Hist. 103,	21 Lasuen
Baumbaugh, Ernest Clair : Santa Rosa,	E. E. 31,	167 Encina
Baumgartner, Edward Charles : San Jose,	E. E. 38,	42 Lenzen,S.JoseS
Bayly, George Harold : Los Angeles,	Geol. 39,	Sigma Chi
[1]Bayly, Roy Downer : Los Angeles,	Rom. Lang. 48,	Sigma Chi
Beach, Frederick Harold : Palo Alto,	Engl. 74,	626 Gilman P
[1]Beacock, James Carl : Campbell,	Lat. 37,	948 Ramona P
Beal, Carl Hugh : Palo Alto,	Geol. 49,	459 Hamilton
Beal, Ralph Raymond : Palo Alto,	E. E. 82,	459 Hamilton P
[2]Beall, Harry Hammond : Los Angeles,	Pre L. 63,	45 Encina
[2]Beanblossom, David William : Palo Alto,	Econ., †	7 Lasuen
[2]Beard, Ruth : Modesto,	Lat.,	10 Roble
Beattie, William Roland : Georgetown,	Graph. 7,	14 Encina
Beaver, Ella Wissie : Tulare,	Hist. 81,	Madroño
Beebe, Charlie Elizabeth : Woodland,	Germ. 14,	65 Roble
Beecher, Charles Edward : Monrovia,	C. E. 46,	192 Encina
Beeger, Henry Albert : Redwood City,	Econ. 43,	Redwood City R
Beeger, Lulu : Redwood, A. B., Stanford, 1910.	Germ. gr.,	Redwood R
[1]Beharrell, Helen Elizabeth : Seattle, Wn.,	Frn. 62,	Delta Delta Delta

Behrens, Earl Charles : Redding, Pre L. 9, 2 Alvarado
Belcher, Frank Baker : Pomona, Pre L. 38, Theta Delta Chi
Belieu, Virgil Ray : Compton, Educ. 115, 156 Encina
Bell, Dixie Alberta : St. Helena, Germ. 49, 12 Roble
Bell, Linda May : St. Helena, Hist. gr., 5 Roble
A. B., Stanford, 1911.
Bellah, Samuel Harrison : Hanford, C. E. 46, 11 Encina
Beman, John Burris : Los Angeles, Pre L. 77, Beta Theta Pi
Benjamin, Ray Grace : San Francisco, Educ. 19, 14 Madroño
Bennett, Rose Margaret : San Diego, Math. 80, 6 Madroño
Benson, Carl Henry : Santa Cruz, M. E. 115, 116 Encina
[1]Berger, Alice Ruth : San Jose, Chem. gr., 73N.6th,S.Jose S
A. B., Stanford, 1908.
Berry, Samuel Stillman : Redlands, Zool. gr., 79 Encina
A. B., Stanford, 1909.
Berryman, John R. Jr. : Los Angeles, Pre L. 40, Kappa Alpha
Best, Neil Orin : Monterey, C. E. 13, 11 Alvarado
Beurhaus, George Henry : Tacoma, Wash., Chem. 42, Phi Delta Theta
Bevier, George Jr. : Spokane, Wash., Chem. 77, Encina
[1]Bianchi, Adolphus Benjamin : Cambria, Law gr., Encina
A. B., Stanford, 1910.
[1]Bickel, Basil Fritz : Chicago, Ill., Econ. 74, Phi Gamma Delta
Biethan, Leonore Louise : Blackfoot, Ida., Chem. 105, 17 Salvatierra
Bille, Elsa Margaret : Orloff, Engl. 103, 227 Bryant P
Birch, Catherine Ida : Redlands, Lat. 103, 11 Roble
Bird, Alice Irene : Sierra Madre, Zool. gr., 16 Alvarado
B. L., Ohio Wesleyan University, 1905.
[2]Black, Edith Virginia : Santa Maria, Engl. 15, 5 Cabrillo
Black, Sherman Lawrence : Monrovia, Pre L. sp. 22, 193 Encina
Blanchard, Leslie : Sacramento, Engl. 87, Delta Delta Delta
Bland, Lotta L. : San Jose, Phyl. 107, 30 Roble
Blase, Roland Roy : No. St. Paul, Minn., C. E. 11, Sigma Nu
[2]Blauer, Emma Elizabeth : San Jose, Educ., 361 Vine S. J. S
[1]Blee, Clarence Earl : Santa Ana, C. E. 171, 214 Emerson P
Blee, Harry Harmon : Santa Ana, M. E. gr., 220 Emerson P
A. B., Stanford, 1910.
Blee, Robert Henry : Santa Ana, Educ. gr., 220 Emerson P
B. S., Occidental College, 1907.
Blethen, Taylor Jay : Portland, Ore., C. E. 38, 4 Lasuen
Bliven, Bruce Ormsby : Santa Cruz, Engl. 102, 154 Encina
[2]Bloeser, William Hargrave : Los Angeles, Econ., Pine Cottage

Blood, Charles N. : Esterbrook, Wyo.,	C. E. 76,	405 Kipling
Blood, John Nelson : Burlingame,	Phyl. 7,	Burlingame
Bly, Edwin Prescott : Los Angeles,	C. E. 48,	40 Encina
Bodley, Edith May : Palo Alto,	Engl. 14,	353 Lytton P
[1]Bodley, Ella Mina : Palo Alto,	Germ. 72,	353 Lytton P
[2]Boezinger, Frank : Palo Alto,	C. E. sp. 25,	176 Bryant P
[2]Boezinger, Lydia Marie : Palo Alto,	Germ.,	176 Bryant P
Bohart, George Shambaugh : Clinton, Ia.,	Chem. 118,	191 Encina
Bond, Lillard Ray : Santa Paula, A. B., Occidental College, 1910.	Engl. gr.,	750 Bryant P
Bond, Rufus Gallatin : Santa Paula,	M. E. 12,	750 Bryant P
Bonestell, Chester Dean : Ventura,	Econ. 10,	16 Salvatierra
Bonetti, Irene Marguerite : Santa Maria,	Hist. 10,	29 Roble
[2]Bonnell, Cornelia : Palo Alto, A. B., Stanford, 1910.	Anat. gr.,	370 Addison P
Bonney, Robert Cecil : Roswell, N. M.,	Pre L. 7,	643 High P
[2]Boone, Cecelia Agnes : Palo Alto,	Entom.,	382 Lincoln P
Borde, Harry Joseph : Santa Monica,	Pre L. 6,	359 Emerson P
Borden, Arthur Dickie : Palo Alto,	S. Bot. 48,	718 Bryant P
Borders, Harry : Marissa, Ill., A. B., Washington University, 1910.	Law gr.,	618 Fulton
[1]Borgwardt, William Richard : Los Angeles,	Lat. †,	454 Hamilton P
Borland, Oral William : San Bernardino,	C. E. 102,	97 Encina
[1]Borough, Anne Elise : San Francisco, A. B., Stanford, 1911.	Lat. 122,	Madroño
[2]Borough, Richard Marguerite : San Fran..	Hist.,	Madroño
Bostwick, Stewart Ashley : Mill Valley,	Pre L. 66,	Theta Delta Chi
Bothwell, Charlotte L. : Salt Lake City, U.,	Engl. 9,	Delta Delta Delta
Boudinot, Edward Elias : Escondido,	C. E. 109,	190 Encina
Boughn, Sidney Lacy : Riverside,	Pre L. 37,	Theta Delta Chi
Boulware, Clark Lewis : Palo Alto,	Hist. 14,	StockFarmCot.P
Boundey, Elwin James : San Jose,	Geol.113, 194	Moorpark,S.J.S
Bowden, Mary Bethel : San Jose,	Hist. 36,	K. Kappa Gamma
[1]Bowen, Earl Lodwick : Jacksonville, Ill.,	Phyl. 38,	Encina
Bower, Albert G. : Salt Lake City, U.	Phyl. 63,	Sigma Chi
Bower, Italja Mercedes : Los Angeles,	Hist. 61,	Madroño
Bower, William David : Salt Lake City, U.,	Pre L. 12,	Sigma Chi
Bowes, Florence Mildred : Santa Ana, A. B., Pomona College, 1910.	Germ. gr.,	16 Alvarado
[1]Bowler, Mabel Gertrude : Los Angeles, A. B., Stanford, 1911.	Frn. 120,	Delta Gamma

[1]Bowman, Robert Chapman : Pacific Grove, Engl. 15, 417 Emerson P
Boyd, Harold Chester : San Francisco, C. E. 42, Delta Kappa Epsilon
Boyd, Harold Edward : Milpitas, Geol. 109, 109 Encina
[2]Boyd, Marguerite Ruth : Easton, Math. 13, Easton
Boyers, Luther Musson : Decatur, Ind., Engl. 104 319 Alma P
Boyle, Lewis Vincell Jr. : Escondido, Econ. gr., 156 Encina
A. B., Stanford, 1910.
Boyle, Margaret Louise : Escondido, Engl. 95, College Terrace
[1]Boyle, William Archdall : San Rafael, Phyl. 81, 152 Encina
Brace, Burton Byron : Oakland, Pre L., Kappa Sigma
Bradford, Albert Grover : Eureka, Pre L. 42, 199 Encina
[2]Bradley, Anna Laura : Pasadena, Econ. † 11, Pi Beta Phi
Bradley, Helen : Palo Alto, Span. 39, 645 Lytton P
Brady, Emmett James : Columbia, Med. gr., San Fran.
A. B., Stanford, 1911.
Brainerd, Fred Lindley : Los Angeles, Chem. 39, Kappa Sigma
[1]Brainerd, Gertrude Gardner : Los Angeles, Engl. 120, Gamma Phi Beta
A. B., Stanford, 1911.
Branner, George Casper : Stanford Univ., Geol. 42, Delta Upsilon
Brawley, William Parkhurst : Seattle, Wn., Pre L. 3, Phi Delta Theta
[2]Brekke, Mabel Adella : Los Altos, Engl. 12, Los Altos L
Brewer, Edward Vere : Elyria, Ohio, Germ. gr., 11 Alvarado
A. B., Stanford, 1911.
Bridgman, Roy Wade : San Jose, Educ. 12, 343 S. 2, S. J. S
Briggs, Ivon Clay : Santa Rosa, C. E. sp. 47, Pine Cottage
[1]Bristol, Louis Henry : Los Angeles, Econ. sp., Delta Tau Delta
Bromley, Angelica : San Francisco, Hist. 8, Delta Delta Delta
Brooks, Anne : San Jose, Lat. 50, Pi Beta Phi
Broomell, Harold Francis : Tacoma, Wn., Pre L. 28, Pine Cottage
Brown, Adele : San Jose, Germ. 62, 277 E. San. Sal., S. J. S
Brown, Agnes Elizabeth : Palo Alto, Hist. gr., 412 Cowper P
A. B., Stanford, 1906.
Brown, Albert Skillman : Mendocino, C. E. 67, 90 Encina
Brown, Claude Everette : Berkeley, Phyl. 10, 195 Encina
Brown, Comer Pitts : Duarte, C. E. 9, Theta Delta Chi
Brown, Earl Daniel : Campbell, C. E. 76, 31 Encina
Brown, Floyd Cromwell : Selma, C. E. 67, 83 Encina
Brown, Harry Edgar : Sacramento, Econ. 94, Kappa Sigma
[2]Brown, John Miller : San Jose, Pre L., S. Alpha Epsilon
Brown, Marguerite : Palo Alto, Germ. 40, 11 Roble
Brown, Michael Faraday : San Mateo, Pre L. †4, 202 Encina
A. B., Santa Clara College, 1909.

Brown, Ralph Waldo : Shawmut,	C. E. 41,	255 Lytton P
[1]Brown, Ray Milton : Selma,	M. E. 13,	195 Encina
[1]Brown, Roger Houssels : Duarte, A. B., Stanford, 1911.	C. E. 130	Theta Delta Chi
Brown, Selden : Seattle, Wash.,	Econ. 32,	Beta Theta Pi
Browning, Aaron Percival: Santa Barbara,	C. E. 74,	104 Encina
Brunner, Julia : Alhambra,	Phyl. 43,	43 Roble
Bryan, Hugh Crawford : Napa,	Hist. 6,	Delta Tau Delta
Bryan, Samuel : Anacostia, D. C., A. B., Stanford, 1910.	Econ. gr.,	106 Encina
Brydolf, Vernon Mars : San Bernardino,	Pre L. 10,	Sigma Nu
[1]Bubb, John Boulware : Palo Alto, A. B., Stanford, 1911.	M. E. 131,	731 Hamilton P
Buckingham, Elisabeth Lee : Palo Alto, A. B., Stanford, 1910.	Engl. gr.,	659 Melville P
[1]Budde, Clarmae : Marcus, Ia., A. B., Stanford, 1910.	Econ. gr.,	515 Waverly P
Budge, Alexander Gron : Medford, Ore.,	M.E.77,	SigmaAlphaEpsilon
Buffum, George Mitchel : Palo Alto,	Econ.45,	Melville & Webster
Buker, Earl Leroy : Ceres,	E. E. 63,	46 Encina
Bull, Edith Agnes : San Francisco,	Hist. 44,	K. Kappa Gamma
Bullard, Helen Talbott : Los Angeles,	Hist. 14,	K. Alpha Theta
Bullis, Ileen : Los Angeles,	Hist. 25,	Alpha Phi
Burbank, Daniel Wellman : Santa Cruz, A. B., Stanford, 1909.	Law gr.,	127 Encina
Burbridge, Harry Carleton : Palo Alto, A. B., Stanford, 1908.	Phys. gr.,	301 Kipling P
Burke, Charles Victor : Palo Alto, A., B., Stanford, 1907; A. M., 1908.	Zool. gr.,	603 Lytton P
Burke, Grace Lilian : Los Angeles,	Engl. 73,	Alpha Phi
Burkham, Eleanor Frances: San Francisco,	Engl. 67,	56 Roble
[2]Burlingame, Arthur Allison : San Fran.,	Phyl. sp. 30,	435 Cowper P
Burns, Anna Catherine : Jerome, Ida.,	Engl. 103,	18 Roble
Burns, William Tecumseh S.: Chicago, Ill.,	Pre L. 9,	Phi Gamma Delta
Burnside, Irene Frances : Des Moines, Ia.,	Germ. 64,	Delta Gamma
Burrell, Logan : Portland, Ore.,	Geol. 45,	29 Encina
[2]Burris, Arthur Fredrick : Los Angeles,	Geol.,	Pine Cottage
Burton, Miriam Helene : Sunnyvale,	Germ. 14,	Sunnyvale S
Bush, Barnard B. : Redlands,	Pre L. 78,	182 Encina
Bush, George Barnard : Riverside, A. B., Stanford, 1910.	Law gr.,	Delta Chi
Butcher, William Preston : Santa Barbara,	Pre L. 48,	88 Encina

Cage, Albert Gallatin : Riverside, E. E. 12, Kappa Alpha
Calderwood, Everett Morse : Palo Alto, E. E. 55, 531 Cowper P
Camp, William Roswell : Palo Alto, Econ. gr., 559 Cowper P
A. B., Stanford, 1909.
Campbell, Clarence P. : Los Angeles, M. E. 64, 245 Ramona P
Campbell, Erroll Preston : Modesto, C. E. 12, 13 Encina
Campbell, Helen Darby-Webster : Palo Alto, Hist. 103, 1160 Bryant P
Carlton, Dave Pierce : Riverside, C. E. 9, 626 Gilman P
[2]Carpenter, George W. G. : Manton, R. I. Econ. 100, 249 Kipling P
[1]Carpenter, Mark A. : Ukiah, Law sp. 63, 75 Encina
[1]Carson, Marion Vroom : Palo Alto, Engl. 120, 455 Forest P
A. B., Stanford, 1911.
Carson, Merwin Bishop : Palo Alto, C. E. 90, 455 Forest P
Carter, Russell Brace : Los Angeles, Pre L. 67, Delta Upsilon
Carus, Clayton Douglass : Pasadena, Hist. 50, 249 Kipling P
Carus, Evelyn Temperance : Gridley, Hist. 27, 551 Univ. P
Cary, Edward Guilford : Palo Alto, Phyl.-Med.sp.115, 158Encina
Case, Eunice : Kalama, Wash., Lat. 76, 27 Roble
Case, Mabel : Kalama, Wash., Zool. 111, 53 Roble
Cashbaugh, James Anthony : Bishop, Pre L. 96, Encina
Cass, Donald : Los Angeles, Phyl. 10, Zeta Psi
Cass, Louis : Los Angeles, Geol. 37, Zeta Psi
Castle, Otis Henry : Pasadena, Pre L. 11, 232 Lytton P
Caswell, Albert Edward : San Jose, Phys. gr., 9S.Lincoln,S.J. S
A. B., Stanford, 1908.
[1]Cates, Ella Margaret : Los Angeles, Hist. 33, 11 Salvatierra
Cavalletto, James D. : Santa Barbara, Law sp. 6, 16 Salvatierra
Cave, Mabel Elysabeth : Redlands, Lat. 63, Delta Delta Delta
Cawston, Arthur Hamilton : Los Angeles, Pre L. 10, 635 Bryant P
Cecil, Neil McComas : Modesto, C. E. 76, 53 Encina
Chamberlain, Henry : Los Angeles, M. E., Delta Upsilon
Chamberlain, Kendrick : Los Angeles, Pre L. 77, Delta Upsilon
Champion, Grace : Colton, Hist. 10, 4 Madroño
Chandler, Alice May : Los Angeles, Germ. 13, 16 Madroño
Chandler, Wilbur Ray : Fresno, Econ. 44, 68 Encina
Chapman, Alice Louise : Redlands, Frn. gr., Delta Delta Delta
A. B., Stanford, 1910.
Chapman, Grant : Covina, E. E. 7, 18 Encina
Chapman, Herbert Samuel : Clayton, Chem. 12, 656 Bryant P
Charlton, Howard C. : Portland, Ore., Econ. 22, Zeta Psi
Check, Neoma : San Francisco, Econ. 31, 16 Alvarado

Cheda, Gilbert Ernest : San Luis Obispo, Geol. 94, Encina
Cheda, Henry Prosper : San Luis Obispo, Geol. 84, 69 Encina
Childs, Grace : Redlands, Hist. 74, Gamma Phi Beta
Childs, Hubert Guy : Palo Alto, Educ. gr., 436 Lytton P
B. S., University of Minnesota, 1897.
Childs, Leroy : Redlands, Ent. 42, Phi Delta Theta
Chiles, Chester Arthur : Ellensburg, Wn., Prc. L. 10, 16 Alvarado
[2]Chislett, William Jr. : Los Angeles, Lat. gr., 20 Lasuen
A. B., Stanford, 1910.
Christensen, Carlo P. : Kalispell, Mont., E. E. 97, 318 Emerson P
Christin, Charles Alfred : San Francisco, Pre L. 92, Delta Upsilon
Chuck, A. Hong-Sung : Heung-Shan, Chi., C. E. 115, Stanford Res.
Clark, Birge M. : Stanford Univ., Graph. 13, 4 Cabrillo
Clark, Douglas : Menlo Park, Geol. 11, Menlo Park M
[1]Clark, Douglas : Eureka, Grk. 120, 948 Ramona P
Clark, Edna Ellita : Ventura, Hist. 104, 21 Lasuen
Clark, Gladys Willmary : Gilroy, Graph. gr., 5 Roble
A. B., Stanford, 1911.
Clark, Lester Percy : Redlands, C. E. 78, 178 Encina
[2]Clark, Mabel Irene : Ventura, Germ. 11, 21 Lasuen
Clark, Melville Nathaniel : Altadena, E. E. 65, 216 Emerson P
[1]Clark, Vernon Albert : Alameda, Chem. 57, 255 Lytton
Claussen, Thomas Hibben : Sausalito, C. E. 3, 16 Salvatierra
Clawson, James Imre : Los Angeles, Econ. 12, Delta Upsilon
Clift, Helen Miller : San Francisco, Hist. 80, 21 Lasuen
Cline, George Willis : San Jose, Phyl. 41, 349N.14th, S. J. S
Clithero, Electa : Boise, Ida., Germ. 45, Delta Delta Delta
Close, Carlos Cooper : Spokane, Wash., Pre L. 9, Phi Kappa Psi
Close, Otha Harrison : Orange Vale, Educ. 73, 5 Lasuen
Clover, Philip Petrie : Los Angeles, C. E., 14, D. Kappa Epsilon
Cluff, Alfred Thomas : Reno, Nev., Pre L. 12, Salvatierra
[1]Clyde, Robert William : San Francisco, C. E. 42, Kappa Alpha
Coates, Roy Dean : Salt Lake City, U. E. E. †8, Sigma Chi
[2]Cochrane, Helen : San Francisco, Hist. †, 22 Lausen
Coddington, Albert Allen : San Francisco, M. E. 111, 97 Encina
Coe, Arthur Frederic : Los Angeles, Law gr., 43 Encina
A. B., Stanford, 1909.
[1]Coffin, Charles Watson : Marion, Ind., Med.gr., 435Buchanan,S.F.S.
A. B., DePauw University, 1910.
Coffin, Chester LeRoy : Reno, Nev., Pre. L. 60, 85 Encina
Coffin, Emily Lee : Carson City, Nev., Hist. 109, Alpha Phi

Coggins, Anna P. : Germantown, Pa., Engl. 31, 750 Bryant P
Coggins, Edith Irene : Germantown, Pa., Econ. 35, 750 Bryant P
Cole, Charles Arthur : Ventura, E. E. 12, 16 Salvatierra
Cole, Ralph G. : San Jose, Econ. 86, Mayfield
Coleman, Emily Augusta : Tacoma, Wash., Hist. 38, Alpha Phi
Coleman, Thomas Lynch : Los Angeles, PreL.66, DeltaKappaEpsilon
[2]Collin, Otis Val : San Francisco, Econ. 21, Kappa Sigma
Conant, David Jordan : San Jose, M. E. 13, 77 Encina
Connell, George Albert : San Jose, Chem. 12, 319 N. 3d, S. J. S
Coombe, Ila Eloise : San Francisco, Hist. 22, K. Kappa Gamma
Coonan, Clarence : Eureka, Law gr., Delta Upsilon
A. B., Stanford, 1909.

Cooper, Jay T. : Woodland, Pre L. 73, 35 Encina
Cooper, Warren Gosselin : Eureka, Geol. 36, 405 Emerson P
Coover, John Edgar : Stanford Univ. Psych. gr., Menlo Heights
A. B., Stanford, 1904; A. M., 1905.

Coover, Margaret Evelyn : Stanford Univ., Bot. sp. 102, Menlo Heights
Corbet, Edward Burke : San Francisco, Geol.57, SigmaAlphaEpsilon
Cornwall, Edward A. : Redlands, Pre L. 11, 80 Encina
Cosper, Elizabeth May : Tacoma, Wash., Graph. 42, 12 Alvarado
Cottrell, Joseph Paul : Colton, Pre L. 37, 24 Encina
Couch, Mary Juanita : Vacaville, Bot. gr., 16 Alvarado
A. B., Stanford, 1910.

Cowan, Floyd Wellesley : Fresno, Pre L. 14, Chi Psi
Cox, Anna Shipley : San Jose, Lat.gr., 855Chapman,S.JoseS
A. B., Stanford, 1909.

Cox, Catharine Morris : San Jose, Germ.85, 855Chapman.S.J.S
Cox, Guy : Walnut Hill, Ill., Engl. sp. 9, 362 Yale
[2]Cox, H. Ben : San Jose, Pre L., 667 S. 10th, S. J. S
Cox, Joel Bean : Honolulu, H. T. C. E. 11, 333 Channing P
Cozzens, Edwin : San Jose, E. E. 49, Box 529, S. J. S
Cram, Clara : East Highlands, Engl. 15, Pi Beta Phi
Cramer, Thomas Meredith : Palo Alto, Chem. 112, 675 Channing P
Crandall, Darell : Palo Alto, Geol. 55, 91 Encina
Crandall, Hector : Palo Alto, S. Bot. 38, 91 Encina
Crandall, Harriet Ruth : Palo Alto, Graph. 13, 737 Waverley P
Crary, Allan Hodgdon : Los Angeles, Econ. 49, Kappa Sigma
Crary, Gordon Byxbe : Los Angeles, Pre L. 11, Kappa Sigma
Craven, Leslie : Bellingham, Wn., Law gr., Delta Chi
A. B., Stanford, 1909.

[1]Crawford, Fred William : San Jose, Law gr., 209, Curtner, S. J. S
A. B., Stanford, 1909; J. D., 1911.

Crawford, James Porter : San Jose, Phyl. 91, 119 Encina
Crellin, Earle Adair : Pleasanton, E. E. 106, Zeta Psi
Crellin, Ruth : Pleasanton, Hist. 40, Alpha Phi
Crippen, Roy Daniel : San Diego, M. E. sp. 8, Delta Tau Delta
Crippen, Ruth Melissa : San Diego, Hist. 54, Alpha Omicron Pi
Cronyn, Theodore : Bernardston, Mass., C. E. † 23, 57 Encina
Crook, Welton Joseph : Melbourne, Aust., Geol. 104, 146 Waverley
[1]Croop, Arthur M. : San Jose, Educ.123, St.JamesHo.,S.J.S
A. B., Stanford, 1911.

Crosby, Clara : Los Gatos, Zool. 38, 55 Roble
Crosby, Ethel Lee : San Diego, Engl. 45, 602 Cowper
Cross, Donella Mary : Mayfield, Lat. gr., Evergreen Park M
A. B., Stanford, 1910.

Cross, Robert John : Mayfield, Chem.103, EvergreenParkM
[1]Crown, Frank Anton C. : San Jose, Hist. gr., San Jose S
A. B., Lawrence University, 1905; M. D., Marquette University, 1906.

Crumby, Mabel G. : New Hartford, N. Y. Hist. 46, Delta Gamma
Cullen, Edward James : Gilroy, C. E. 94, 52 Encina
Cullen, John Francis : Gilroy, E. E. 48, 52 Encina
[2]Cuneo, Irene Rose L. : San Mateo. Frn., Alpha Omicron Pi
[1]Cunningham, May Theresa : Palo Alto, Econ. 18, 545 Forest
Currier, Ruth Leslie : Cupertino, Germ. 25, Cupertino C
Curry, William Graham : Roseberg, Ore., Law sp. 52, Kappa Alpha
Curtice, Louise Elizabeth : Spokane, Wash. Hist. 14, 30 Madroño
Curtner, Marion Lucy : Warm Springs, Germ. 26 20 Madroño
[1]Cuthbertson, Alexander M. : Manchester, Chem. gr., 638 Channing P
A. B., Stanford, 1909.

[1]Cuthbertson, Alice Bertha : Manchester, Germ. gr., 638 Channing P
A. B., Stanford, 1909.

Dalzell, William Campbell : Omaha, Neb. Pre L. 65, 318 Emerson P
Daniel, Suzanne Margaret : Los Angeles, Hist. 11, 1 Alvarado
Darsie, William Pettigrew : Palo Alto, Hist. 11, Phi Kappa Psi
Davidson, Olive Marion : Colma, Hist. 55, Roble
Davis, Alexander : Pomona, Pre L. 9, Theta Delta Chi
Davis, George William : Willits, C. E. 102, 75 Encina
Davis, Grace Maple : Redwood City, Hist. gr., Redwood City R
A. B., Stanford, 1910.

Davis, Harvey B. : Pomona, C. E. † 11, Theta Delta Chi
Davis, John Allen : Los Angeles, PreL.74, DeltaKappaEpsilon
Davis, Paul Judson : Willows, Econ. 16, 730 Hamilton
Davis, Shelden Bacon : Stockton. Span. 40, 30 Encina

Dawson, H. Ward : Los Angeles, Econ. 10, Beta Theta Pi
Day, Carl Edwin : Watsonville, Pre L. 11, 155 Encina
Deacon, Marguerite Francine: San Martin, Lat. 45, 68 Roble
[1]Dean, Eleanor Katherine E.: Independence, Frn. 41, Gamma Phi Beta
Decius, Louis C. : Los Angeles, Geol. 3, Zeta Psi
Denham, Charles Maurice: Arroyo Grande, C. E. 9, 334 Waverley P
Dennis, Dede Irma : San Jose, Econ.80, 160N.11th,S.Jose S
Dennis, Herbert Ernest : Loveland, Colo., Phil. 106, 567 Lincoln P
[1]Dernham, Sadie : San Francisco, Frn. 122, 1 Alvarado
A. B., Stanford, 1911.

Dice, Lee Raymond : Prescott, Wash., Zool. † 11, 19 Lasuen
Dickinson, Perry Yaple : Stockton, C. E. 74, 93 Encina
Dickson, Philip West : Los Angeles, Econ. 100, Sigma Nu
Dietrich, Waldemar Fenn : San Francisco, Geol. 46, 145 Encina
Dimon, Asa Cyrus : San Jose, Econ. 11, Delta Tau Delta
Dingle, Charles Oscar : Woodland, C. E. 76, 53 Encina
Ditz, George Armand : Stockton, Pre L. 109, 58 Encina
Dodd, John McKee : San Francisco, E. E. 6, 405 Emerson P
Dodge, Walter Jennings : Los Angeles, E. E. 48, Stanford Inn
Dole, Kenneth Llewellyn : Riverside, Phyl. 104, Beta Theta Pi
Don Carlos, Harlan S. : Denver, Colo., Engl. 102, 667 Univ. P
Donnelly, Jennie Lindsay : Truckee, Grk. 109, 16 Alvarado
Donovan, Augustine Michael : San Jose, Law sp. 37, Chi Psi
Dooling, Charles Wagner : Hollister, E. E. † 14, 177 Encina
A. B., Santa Clara College, 1910.

Dooling, Maurice Timothy : Hollister, Pre L. 101, 180 Encina
[2]Dorr, Charles Sweeney : San Jose, Phyl. gr., 706 Emery S.J. S
A. B., University of Pacific.

Douglass, Frank Malcolm Jr. : Hollywood, Econ. 6, Delta Upsilon
Downey, Abner David : Palo Alto, Educ. gr., 310 Waverly P
A. B., Stanford, 1906.

Doxsee, Wilbur Harvey : Redwood City, C. E. 67, Redwood City R
Draper, Roscal Leroy : Arroyo Grande, Phyl. 43, 38 Encina
[1]Drenkel, Harry Wesley : Los Angeles, Pre L. 37, 42 Encina
[1]Drew, Arthur Homer : Fresno, Pre L. 127, 225 Channing
A. B., Stanford, 1911.

Driscoll, Marjorie Charles : Pasadena, Engl. 47, 50 Roble
[1]Duff, Isabel Mary : Menlo Park, Lat. gr., Menlo Park M
A. B., Stanford, 1910.

Duff, James Leo : Menlo Park, Graph. 44, Menlo Park M
Duff, Marcella Carmelita : Menlo Park, Lat. 106, Menlo Park M

Duffus, Robert Luther : Waterbury, Vt., Hist. gr., 2 Encina
A. B., Stanford, 1910.

Dunham, Cornelius T.: W. Newton, Mass., Law sp. 25, Phi Kappa Psi
Dunipace, Gertrude Hilda : Morgan Hill, Germ. 55, 750 Bryant
Dunlap, Carol : Hanford, Lat. 96, 20 Roble
Dunlap, Lillian Susan : Whittier, Engl. 117, Pi Beta Phi
Dunn, Teresa Pauline : Monrovia, Germ. 12, Madroño
Dunn, William Edward : Austin, Tex., Hist. gr., 417 Emerson
A. B., University of Texas, 1909; A. M., Stanford, 1910.

Dunnagan, Jesse J. Philips : San Jose, C. E. 9, 164S.7th,S.Jose S
Duren, Frances Mae : Bakersfield, Hist. 87, Roble
Duren, Nellie Isabelle : Bakersfield, Germ. 110, 324 Emerson P
Durgin, Rubie Mae : Cupertino, Phyl. 12, Cupertino C
Durst, Ethel Helena : Sunnyvale, Math. 82, 11 Salvatierra
Durst, Harold Douglass : Sunnyvale, Law sp. 4, Sunnyvale S
Duryea, Robert Francis : Palo Alto, C. E. 44, 308 Lincoln P
[1]Dwyre, Harry Golding : Los Angeles, C. E. 47, Sigma Nu
Dye, Theodore Cole : Dayton, O. Econ. 85, Delta Tau Delta
Dyer, Thomas Laffayette : Alva, Okla., Pre L. 40, 454 Hamilton P
Easler, James Marcellus T. : Los Angeles, E. E. 102, 245 Ramona P
Eastey, Julia Mildred : San Jose, Hist. 40, 2 Madroño
Easton, Martin H. : Bellingham, Wn., Pre L. 20, 358 Homer P
Eddleman, Margaret Olive : Tropico, Hist. 23, 7 Salvatierra
[2]Edwards, Alfred Rice : Palo Alto, Pre L., Phi Delta Theta
[1]Edwards, Mary Constance : San Jose, Hist. gr., 654 S 8th, S. J. S
A. B., Stanford, 1910.

Ehrenberg, Adele : Alameda, Engl.105, Alpha Omicron Pi
Ehrenclou, Alfred Hjalmar : Redlands, Zool. sp. 8, 832 Kipling P
[1]Ehrhorn, Adolph Edward: San Francisco, Econ. 79, Delta Tau Delta
Eichner, Earle Roess : Pasadena, Pre L. 12, 232 Lytton P
Eliel, Paul : Pasadena, Econ. 36, Delta Upsilon
Ellett, William Henry Jr. : Monrovia, Pre L. 5, Phi Kappa Psi
Ellias, Laura Lillian : Tropico, Engl. 10, 23 Salvatierra
Elliot, Walter : Santa Maria, C. E. 110, 1301 Cowper P
Elliott, John Elbert : Pacific Grove, Geol. 112, 185 Encina
Elliott, Louis Dunshee : Stanford Univ., Chem. 106, 20 Encina
Ellis, Lona Evelyn : Pacific Grove, Graph. 15, 69 Roble
[1]Ellis, Sidney Hemenway Jr. : Pasadena, Geol. 23, Zeta Psi
Ellsaesser, Fred : Braymer, Mo., Chem. 81, 235 Emerson P
Elsey, Howard McKee : Modesto, Chem. 16, 656 Bryant P
Ely, Helen Elizabeth : Phoenix, Ariz., Engl. 105, Delta Gamma

Emerson, Arthur W. : Honolulu, H. T., Graph. 10, 611 Waverley P
Emerson, Ralph Hettrick : Spokane, Wn., C. E. 69, Sigma Nu
Emery, Rose Frances : San Jose, Engl. 9, 37 Roble
Emmons, Marjorie Florence : Alameda, Hist.24, KappaKappaGamma
Enderle, Maurice Frank : Santa Ana, Pre L. 69, 7 Encina
Endres, Herman : Los Angeles, E. E. 80, 147 Encina
Engelhard, Edith Goebel : Los Angeles, Germ. 82, Gamma Phi Beta
Erb, Benjamin Edward : Chemalnus, B. C., Geol.32, SigmaAlphaEpsilon
Erwin, Lewis Brown : Muskegon, Mich., E. E. 13, College Terrace
[2]Escobar, Pedro J. : San Salvador, C. A., Span., Theta Delta Chi
[2]Estes, Frances : Los Angeles, Hist. 10, Pi Beta Phi
[1]Euans, Kenneth Logan : Palo Alto, Germ. 120, Phi Kappa Psi
A. B., Stanford, 1911.

Eustace, Marie Genevieve : Pacific Grove, Germ. 12, 1 Alvarado
[2]Evans, Helen Elizabeth : Mt. View, Graph. 11, 251 Emerson P
Evans, Irene Marguerite : Mountain View, Lat. † 16, 251 Emerson P
Evenden, Edward S. : McMinnville, Ore., Educ. gr., 117 Encina
A. B., Stanford, 1910.

Everett, Eileen Erica : Orange, Hist. 4, Alpha Omicron Pi
Everly, Vera Leona : Nampa, Ida., Engl. 15, 16 Alvarado
Eyer, Marguerite Knowlton : Beaumont, Engl. 55, Alpha Phi
Eygabroad, Lillie Belle : Anaheim, Germ. gr., 16 Alvarado
A. B., Pomona College, 1910.

Fallas, Roy Edwin : Los Angeles, Phyl. 102, 166 Encina
Falor, Richard Irvin : Eureka, Pre L. 7, 405 Emerson P
Farnsworth, Earle F. : Salt Lake City, U., Econ. 103, Sigma Chi
[1]Farnsworth, Lillian McLaine : Visalia, Hist. gr., K. Kappa Gamma
A. B., Stanford, 1910.

Farr, Roy John : Muncy, Pa., Law gr., Acacia
A. B., Bucknell University, 1908.

Fassett, Weston Willard : Stockton, Phys. 76, 405 Kipling P
Fatjo, Antonio Antolin : Santa Clara, Pre L. 32, Santa Clara S
Faubel, Grace : San Francisco, Hist. 51, 1 Alvarado
Fawcett, Percy Douglas : Tacoma, Wash., Pre L. 62, Vining Bldg P
[1]Fay, Roland Cecil : Kemeth, Kans., Law gr., Acacia
A. B., University of Kansas, 1909.

Fellows, Florence May : Los Angeles, Hist. 73, 23 Roble
Feraud, Natalie Bourgeois : Redlands, Engl.106, Alpha Omicron Pi
Ferguson, Harold Gale : Hollywood, PreL.108, DeltaKappaEpsilon
Ferguson, Norris R. : Eureka, M. E. 41, 68 Encina
[1]Ferris, William Alexander : Denver, Col., M. E., Delta Kappa Epsilon

[2]Fertig, Emmet Ross : Noblesville, Ind., B. L., University of California, 1910.	Law gr.,	Phi Kappa Psi
Field, Andrew James : San Jose,	E. E. 82,	162 Encina
Field, A. Ruth : Los Angeles,	Hist. 61,	59 Roble
Field, Bernice : San Jose, A. B., Stanford, 1909.	Germ. gr.,	167SPriest,S.J.S.
[1]Fields, Arthur Lewis : Portland, Ore.,	Econ. sp. 25,	Kappa Sigma
[2]Finch, Robert McMasters : Los Angeles,	Econ.	Chi Psi
Finley, George Wear : Mayfield,	Educ. sp. 13,	College Ter.
Finney, Wallace Rolland : Modesto,	M. E. 63,	9 Encina
Finnie, Robert Johnston : Sacramento,	PreL.35,	SignaAlphaEpsilon
Fitting, John Waldemar : San Bernardino,	C. E. 94,	18 Encina
Fitzgerald, Robert Emmet : Palo Alto, A. B., Stanford, 1910.	Law gr.,	401 Pope P
Flatau, Elsa : Los Angeles,	Germ. 13,	Madroño
Fleming, Clarence Edwin : Los Angeles,	Pre L. 40,	19 Lasuen
[1]Fletcher, Katheryn : East Highlands,	Math.25,	KappaAlphaTheta
Flugel, Felix : Palo Alto,	Econ. 11,	1153 Cowper P
Fogel, Moses Miller : Santa Monica,	Pre L. 69,	45 Encina
Foley, Margaret Inez : San Mateo,	Engl.20,	460Wisnom,S.M. S
[1]Foot, Paul : Kalispell, Mont.,	E. E. sp.,	318 Emerson P
[2]Foote, Robert Parke : Evanston, Wyo.,	E. E. 107,	318 Emerson P
Forbes, James Hyde : Los Angeles,	C. E. 32,	Delta Upsilon
Ford, Edwin Hopkins : Mazeppa, Minn.,	Engl. 9,	2 Alvarado
Ford, Elizabeth Edwina : Mazeppa, Minn.,	Engl. 98,	2 Alvarado
Ford, Ernest Leland : Redlands,	M. E. 113,	39 Encina
Ford, Nell Elizabeth : Oakland, A. B., Stanford, 1910.	Phyl. gr.,	Alta Vista
Fore, Harry Adolph : Campbell,	E. E. 23,	65 Encina
Fortune, Pearl Blanche : Cedar Falls, Ia.,	Lat. 105,	311 Everett P
Foster, Frederick Leland : Corona,	Pre L. 37,	142 Encina
Foster, George Leroy : Tacoma, Wash.,	Pre L. 45,	115 Encina
[2]Foster, Marjorie Greene : San Rafael,	Chem. 11,	51 Roble
Foulke, Charles Lesley : Rialto,	C. E. 13,	169 Encina
Fowle, Helen Van de Water : Denver, Colo.,	Eng107,	KappaKappaGamma
Fox, Philip Benton : Redwood City,	Geol. 68,	Redwood City R
Franceschi, Franco E. : Santa Barbara,	C. E. 9,	136 Encina
Frank, Alvin H. : Los Angeles.	Hist. 35,	64 Encina
Frary, Gladys May : San Diego,	Educ. 11,	Delta Delta Delta
Frary, Ruth Thayer : San Diego, A. B., Stanford, 1910.	Engl. gr.,	Delta Delta Delta

Freeman, Blanche K. : Palo Alto, Engl. gr., 627 Waverley P
A. B., Indiana University, 1896.
French, Annie Cordelia : San Jose, Hist.13,Willow&Delmar,SJS
French, Norman DuGard : Thomson, Ill., Pre L. 72, Sigma Chi
French, Olive Naomi : Huron, S. D., Chem. 8, 16 Alvarado
Freuler, Beatrice Elizabeth : Berkeley, Hist.† Alpha Omicron Pi
Friedrick, Pauline : San Diego, Graph. 99, Delta Gamma
Frizell, De Ralph : San Diego, Econ. 13, 549 Cowper P
Frost, Albert A. : San Diego, Econ. 85, 45 Encina
Fulkerson, Charles Merrill : Xenia, Ohio, Chem. 103, 2 Lasuen
B. L., Berea College.
[1]Fullaway, David T. : Honolulu, T. H., Ent. gr., Campbell
A. B., Stanford, 1908.
Funsten, Betty Glover : San Francisco, Hist.12, KappaKappaGamma
Fyfe, Andrew Douglas : Los Angeles, Geol. 42, Delta Upsilon
Gamble, Florence : Hanford, Graph, 15, Pi Beta Phi
Gamble, Launcelot John : Palo Alto, M. E. 13, Phi Delta Theta
[2]Ganong, Carl Field : Oregon City, Ore., C. E. 108, 454 Hamilton P
[1]Garcelon, Warren Robert : Colma, C. E. sp. 11, CampusCyclery
Gard, Edith Nellie : Salt Lake City, U., Graph. 8, Roble
Gard, Frank Jacob : Glendora, Pre L. 10, 18 Alvarado
Gardner, Sydnie Aileen : Orange, Math. 44, Madroño
Garner, Aubrey Hamilton : Astoria, Ore., Geol. 80, 119 Encina
Garst, Delta Avis : Riverside, Hist. 76, Delta Delta Delta
Gassaway, Gordon : Los Angeles, Pre L. 66, Kappa Alpha
Gault, Frank Sumny : Los Angeles, Geol. 9, 317 High P
Geary, William Finlaw : Santa Rosa, Pre L. 56, Kappa Alpha
Gehrmann, Wm. Conrad : Davenport, Ia., Geol. 78, Phi Gamma Delta
Geissler, Edward Parsons : Los Angeles, Pre L. 10, Zeta Psi
Geohegan, Helen : Pasadena, Engl. 106, 26 Roble
George, Harrison Paul : San Diego, C. E. 94, 76 Encina
Geppert, Ralph Clinton : Vermillion, S. D., E. E. 27, 349 Kipling P
[2]Gerwin, Vera Marian : Redwood City, Hist. 13, Redwood City R
Gibson, Lewis Braden : Hood River, Ore., Law sp. 8, 847 Bryant F
Giesy, Paul Church : Portland, Ore., Econ.100, Sig.AlphaEpsilon
[1]Gifford, John Sherman : Enid, Okla., Educ. 122, 1140 Bryant P
A. B., Stanford, 1911.
[1]Gifford, Nannine Jeannette : Enid, Okla., Econ. gr., 1140 Bryant P
A. B., University of Oklahoma, 1910.
Gilbert, Carl Hughes : Palo Alto, Pre L. 40, 202 Encina
Gilbert, Hazel Jeannette : Pasadena, Germ. 86, Gamma Phi Beta
Gilbert, Mildred Louise : Sausalito, Engl. 31, Gamma Phi Beta

Gilbreath, Carlisle G. : Monte Vista, Colo., Pre L. 7, 707 Bryant P
Gilchrist, Margaret Josephine : San Jose, Germ. 10, K. Kappa Gamma
Gilfillan, Sermet William : Los Angeles, Econ. 32, Delta Tau Delta
Gill, Emma Gladys : San Francisco, Educ. 77, Gamma Phi Beta
Gilman, Walter Devereux : Los Angeles, Geol. sp. 7, 523 Cowper P
Gilmore, Earl Bell : Los Angeles, Econ. sp. 22, Delta Upsilon
Gilmore, Ralph Rensselaer : Fair Oaks, E. E. 52, Encina
Gipson, Oscar Martin : Los Angeles, Pre. L. sp. 16, 628 Cowper P
[1]Gipson, Roy Ross : Los Angeles, Econ. sp. 3, 235 Emerson P
Glass, William Winslow : Pasadena, C. E. 6, Theta Delta Chi
Gleason, Daisy Marion : Los Angeles, Econ. 108, Delta Delta Delta
Gleiss, Frank Julius : Los Angeles, E. E. 47, 232 Lytton P
Glendenning, Roy James : Santa Clara, Law gr., 126 Encina
A. B., Stanford, 1911.
[1]Glover, Herbert Field : Grand Island, Neb., Pre L., Phi Delta Theta
Gober, Helen Porter : Los Gatos, Germ36, Kappa Kappa Gamma
Goddard, Win Rawdon : Conneaut, Ohio, Chem. 30, 339 Emerson P
Going, Lew Wallace : Portland, Ore., C. E. † 13, 555 Kellogg P
[1]Goldworthy, Elmer C. : Pacific Grove, C. E. 3, 704 Bryant P
Good, Roy Milton : Marshalltown, Ia., Econ. 6, 1130 Waverley P
Goodan, Roger : Los Angeles, Hist. 37, 129 Encina
Goode, Stanley Edward : Los Angeles, Pre L. 75, 66 Encina
Goodrich, Elizabeth Ely : San Jose, Med. gr., Box 1303 S. J. S
A. B., Vassar College, 1907.
Goodwin, Clarence Bernard : Sunnyvale, C. E. 74, Sunnyvale S
Goodwin, William John : Sunnyvale, C. E. 36, Sunnyvale S
Goplerud, Clifford Peter : Osage, Ia., C. E. 11, Kappa Alpha
Gore, Thomas Edwin : Redlands, Pre L. 103, Delta Chi
[2]Gossett, Joseph Orland : Palo Alto, Educ. gr., 255 Homer P
A. B., Stanford, 1909.
Gower, Frances Anna : Los Angeles, Latin 44, 11 Roble
Grace, Charles Stewart : Rivera, C. E. 73, 121 Encina
[1]Gragg, Alden Orville : San Luis Obispo, Econ. 39, Theta Delta Chi
[1]Gragg, Julia Alice : Monterey, Engl. gr., 17 Salvatierra
A. B., Smith College, 1909.
Graham, Katherine Prewitt : Pomona, Engl. 79, Kappa Alpha Theta
Graham, Marguerite : Riverside, Educ. 65, Delta Gamma
Grant, Aaron George : Palo Alto, Educ. gr., 1037 Ramona P
A. B., University of Kansas, 1896; A. M., 1897.
Grass, Donald Frederick : Palo Alto, Econ. gr., 170 Waverley P
A. B., Harvard University, 1889; A. M., 1899.

Green, Boynton Morris : Redlands,	M. E. 14,	5 Lasuen
Green, Carol Mary : Pasadena,	Econ. 13,	12 Alvarado
Green, Charles Havens : Petaluma,	E. E. 49,	949 Emerson
Green, Hazel Elizabeth : Stanford Univ.,	Econ. 34,	13 Salvatierra
Green, Karl : Enid, Okla.,	Engl., 38,	118 Encina
Green, Sidney Sherwood : Long Beach,	Pre L. 8,	Delta Chi
Green, Warren Preston : Preston,	E. E. 99,	139 Encina
Greenfield, Lieurena Cole : St. Helena,	Engl. 80,	38 Roble
Gregg, John Price : Portland, Ore.,	Pre L. 43,	182 Encina
Gregory, Alfred Craven : Suisun,	C. E. 10,	Beta Theta Pi
Gregory, Thelma : Woodland,	Hist. 12,	Pi Beta Phi
Grepe, John Stanley Jr. : E. Highlands,	E. E. 48,	Sigma Nu
Griffin, Roscoe Wadsworth : Vallejo,	Pre L. 59,	4 Lasuen
Grigsby, Geneva : Blandinsville, Ill., A. B., University of Colorado, 1911.	Educ. gr.,	22 Lasuen
Gross, Jeffrey : San Francisco,	Econ. 37,	184 Encina
Grotophorst, Waldo Edward : Santa Clara,	Ent. 12,	Santa Clara S
Grove, Mabel Lewis : Palo Alto,	Hist. 12,	363 Melville P
Grundy, Edith Florence : Los Angeles,	Lat. 110,	603 Waverley P
Guerena, Francis Louis : Sonora,	Pre L. 109,	58 Encina
Gulling, Grayce Eleanor : Seneca,	Graph. 42,	460 Homer P
Gunnell, Dorothy P. : Salt Lake City, U.	Span. 14,	527 Hamilton P
Gunnell, Mary E. : Salt Lake City, U.	Hist. 101,	527 Hamilton P
Guthrie, Anna Nason : San Diego,	Educ. 99,	Pi Beta Phi
Guthrie, Stanley Walter : Los Angeles,	Pre L. 43,	Delta Upsilon
Hackett, Charles Wilson : Chilton, Tex.. A. B., University of Texas, 1909.	Hist. gr.,	417 Emerson
Hackett, Harold Arthur : Flagstaff, Ariz.,	M. E. 39,	Villa de Lagunita
Hadden, Georgina Evelyn : Palo Alto, A. B., Stanford, 1910.	Ent. gr.,	1157 Ramona P
[1]Hadley, Howard Irving : Santa Barbara, A. B., Stanford, 1911.	Pre L. 124,	Encina
Hagerman, Alfred : Los Angeles,	Econ. 20,	Beta Theta Pi
Haig, Florence Bertha : San Gabriel, A. B., Stanford, 1911.	Germ. gr.,	44 Roble
[2]Haight, Marjorie Buell : Alameda,	Hist.,	1 Alvarado
Hails, Raymond Richard : Santa Barbara,	Econ. 45,	Phi Delta Theta
Hakes, Bryant Burdett : Coronado,	Pre L. 10,	Delta Tau Delta
Halcombe, Norman M. : San Francisco,	C. E. sp. 60,	Encina
Haley, Percis Coons : Palo Alto,	Graph. sp. 96,	756 Bryant P
Hall, A. Juillard : Pasadena,	Econ. 36,	Delta Tau Delta

Hall, Elwin Benoni : Los Angeles, Geol. 5, Beta Theta Pi
Hall, Jessie Mary : Alameda, Hist. 35, Delta Gamma
[1]Hallam, Clark : Sioux City, Ia., Pre L. † 12, 359 Emerson P
Halliday, Thos. Woodruff : Spokane, Wn., Geol. 120, Phi Delta Theta
Halm, Arthur Gainsford : Phoenix, Ariz., Econ. 13, Delta Upsilon
[2]Halsted, Wilma May : San Francisco, Hist. 14, K. Kappa Gamma
Hamilton, Arthur Elton : Pasadena, Pre L. 108, 168 Encina
Hamilton, Jo Dimon : Auburn, Phyl. 11, 4 Lasuen
Hamilton, Robert Cecil : Pasadena, Hist. 86, 168 Encina
Hammon, Wendell C. : San Francisco, Geol. 18, Phi Delta Theta
Hammond, Clarence Bray : Palo Alto, Engl. sp. 55, 636 Webster P
Hanawalt, Frank Barrett Jr. : Los Angeles, Econ. 49, 67 Encina
Hanley, Katharine Gertrude : Pasadena, Hist. 104, 21 Lasuen
Hanna, Cornelia Alberta : Redlands, Engl. 99, KappaAlphaTheta
Hanna, Jessie Ray : Los Angeles, Hist. 105, KappaAlphaTheta
Hannibal, Harold Briggs : San Jose, Geol. 63, 60 Encina
Hanny, John Edward : Oregon City, Ore., M. E. gr., Acacia
B. S., Oregon Agricultural College, 1908; M. E., 1909.
Haraguchi, Tomiichi : Nagasaki, Japan, E. E. 47, Japanese Club
Harbaugh, Ross Wallace : Palo Alto, Med. gr., 1301 Cowper P
A. B., Stanford, 1909.
Harding, Edwin Reginald : Palo Alto, Chem. 50, 281 Everett P
[2]Harding, Hal Calvin : Los Angeles, Bot., 2 Lasuen
Hardy, Georgie Saunders : San Diego, Graph. 110, 21 Lasuen
Hardy, Olive : Oroville, Hist. 16, 22 Roble
[1]Harned, Lela Blanche : Alhambra, Germ. 46, 16 Roble
[2]Harnly, Henry Jacob : McPherson Kans., Zool. gr., 748 Ramona P
A. B., Harvard University, 1892.
Harrier, Alice Miriam : Palo Alto, Engl. 10, 1400 Waverley P
[1]Harrigan, Philip Frederick : Los Angeles, Econ. 10, Beta Theta Pi
[1]Harris, Miriam Alice : San Jose, Hist. gr., 440 N. 1st S. J. S
A. B., Stanford, 1910.
Harrison, Rose : Cupertino, Phyl. 8, Cupertino C
[1]Hart, Lowell Jay : Palo Alto, Law gr., 115 Alma P
A. B., Stanford, 1910.
Hartley, Roland E. Jr. : San Francisco, Engl. 10, Theta Delta Chi
Hartman, Flora Helene : Pasadena, Engl. 6, 11 Salvatierra
Hartwell, Marian Lila : Santa Barbara, Hist. 15, 36 Roble
Hartwell, Ross Earl : Salt Lake City, U., Pre L. † 9, 5 Lasuen
Haslett, Roberta : Alameda, Frn.78, KappaKappaGamma
Haslett, Sam'l Montgomerie Jr. : Alameda, Econ. 66, Beta Theta Pi

Hastings, Warren : San Jose, E. E. 13, Hanchett Pk. S. J. S
Hatfield, George Juan : Oakland, Pre L. 112, 120 Encina
Haub, Alma Anita : Santa Rosa, Phys. 11, 51 Roble
Hauck, John Edgar : San Jose, C. E. 7, 423 S. 9th S. J. S
[1]Hawes, Ben Merrill : Santa Cruz, Chem. 84, 173 Encina
Hawkins, Ernest Merrick : Fowler, Ind., Law gr., 526 University P
A. B., Wabash College, 1909.

Hawkins, Lila : Prescott, Ariz., Frn. 33, Delta Gamma
Hawley, George W. : Portland, Ore., C. E. 45, 55 Encina
Haxo, Henry : San Francisco, Frn. gr., 327 Emerson P
A. B., Stanford, 1910.

Hayden, Edith : Fresno, Germ. 103, Madroño
Hayes, Casey Hewitt : Los Angeles, Pre L. 73, Phi Gamma Delta
[2]Hayes, Francis William : Cupertino, Geol., Cupertino C
Hayes, Harold Cecil : Edenvale, Geol. 7, Delta Tau Delta
[2]Hayes, Harriet : Palo Alto, Engl. 93, Roble
Hayes, Jesse Ernest : Campbell, C. E. 7, 534 Forest P
[2]Hayes, Lyetta Adelia : Edenvale, Hist. 12, Gamma Phi Beta
Hayes, Mildred Mary : Edenvale, Engl. 105, Gamma Phi Beta
Hayward, Ida Rickard : Los Gatos, Engl. 104, 42 Roble
Heald, Elmer Willsion : Palo Alto, Pre L. 72, 558 Hawthorne P
Heald, Ethel Grace : Palo Alto, Educ. 40, 558 Hawthorne P
Heartt, Jennie Alice : Los Angeles, Engl. 107, Gamma Phi Beta
Heath, Bessie V. : Jackson, Miss., Educ. 107, 324 Emerson P
[2]Heath, John : Palo Alto, Geol. 1005 Bryant P
Hebert, Joseph Walter : San Jose, Pre L. 62, 338 N. 2nd S. J. S
Heche, Arthur : Pomona, Educ. gr., 430 Kipling P
A. B., Stanford, 1910.

Heflinger, Grace Katherine : Pasadena, Graph. 106, 22 Roble
Heil, George Clinton : El Centro, E. E. sp. 10, 444 Florence P
Hellmann, Richard Hoge : Redwood City, Pre L. 89, Kappa Alpha
[1]Helsley, Gordon Friedrich : Ceres, Phyl. 93, 103 Encina
Helwagen, Carl Wilhelmj : Circleville, O., Geol. 36, 195 Encina
Hempl, Elsa : Stanford Univ., Germ. 12, 8 Cabrillo
Hempl, Hilda : Stanford Univ., Zool. 35, 8 Cabrillo
Henderson, Cecilia : Santa Paula, Lat. 13, 69 Roble
[2]Henderson, Hugh Murphy : Saybrook, Ill., M. E., 656 Bryant P
Henderson, Inez Virginia : Stockton, Hist. 9, Alpha Phi
Henderson, James William : Eureka, PreL.57, SigmaAlphaEpsilon
Henning, Marbry Thurber : El Paso, Tex., Math. 11, 69 Roble
[2]Henningsen, KathleenG. : Glenbrook, Nev., Zool., Roble

[1]Henry, Albert Reece : Tulare. Geol., Sigma Chi
Henshaw, Marshall Brooke : Downey, Pre L. 78, Theta Delta Chi
Hermans, Mabel Clare : Rochester, N. Y., Engl. 106, 53 Roble
Herrick, Florence South : Medford, Ore., Engl. 28, 59 Roble
Herron, Laura Elizabeth : Palo Alto, Hist. 12, 250 Emerson P
Herron, Mary Louise : Palo Alto, Hist. 75, 250 Emerson P
Hertel, Elmer Louis : Pasadena, Hist. 97, Zeta Psi
Hettman, Walter Emil : Rocklyn, Wn., Pre L. 104, 177 Encina
Higgins, Archibald W. : Shrewsbury, Eng., E. E. sp. 18, 909 Univ. P
Higgins, James Edwin Jr. : Alameda, Pre L. 94, Kappa Sigma
Higgins, Sydney Marshall : Los Angeles, Econ. 36, Beta Theta Pi
High, Helen Elizabeth : So. Pasadena, Phys. 111, 55 Roble
Hilby, George Robert : Monterey, Geol. 47, 131 Encina
[1]Hill, Andrew Putnam Jr. : San Jose, Educ.13, 199Infirm.Rd.S.J.S
Hill, Clarence Sylvester : Parma, Ida., Pre L. 10, 5 Lasuen
Hill, Frank Ernest : San Jose, Engl. 102, 157 Encina
[2]Hill, Helen Dodge : San Francisco, Lat. gr., Kappa Alpha Theta
A. B., University of California, 1910.
Hill, Henrie Granville : San Jose, Law gr., 715 W. Julian S.J.S.
A. B., Stanford, 1909.
Hill, Laurance Landreth : Los Angeles, Econ. 85, 56 Encina
Hiller, Hazel Heloise : San Francisco, Hist. 65, Madroño
[1]Hills, Elvert Ray : Beaver, Okla., Hist. 8, 200 Homer P
Hilton, Frank Howard : San Diego, Pre L. 109, Delta Chi
Hinckley, Clive Sturges : Redlands, Chem. 90, 171 Encina
Hindle, Dorothy Marian : Del Mar., Math. 47, 67 Roble
Hine, Thomas Buck : Eureka, Chem. gr., 130 Encina
A. B., Stanford, 1910.
[1]Hirst, William Basil : Los Angeles, Geol. † 4, 19 Lasuen
Hitchcock, Jeannette M. : Tacoma, Wn., Frn. 15, Madroño
Hjelm, Lillian Elizabeth : Los Angeles, Engl. 42, Delta Delta Delta
Hocking, Adeline : San Jose, Math. 107, 557 Univ. S. J. S
[2]Hofer, Laurence : Salem, Ore., Hist. 24, Sigma Chi
[1]Hoff, Eva : San Diego, Germ. gr., 176 Bryant P
A. B., Stanford, 1910.
Hoffman, Henry Ray : Los Angeles, Pre L. 9, 2 Alvarado
Hoffman, John Roy : So. Pasadena, M. E. 14, Phi Delta Theta
*[2]Hoffmann, Melzar Stone : Santa Cruz, C. E. 10, Kappa Sigma
[2]Hoisholt, George Greiersen : Oakdale, Hist., 5 Alvarado
Holcomb, Grant : San Bernardino, Pre L. 111, Detla Chi
Holditch, George Edward : Orange, E. E. 51, 100 Encina

*Died March 25, 1911.

Holeman, George Stevenson : Riverside, Phyl. 69, 7 Encina
Hollensteiner, Arno G. : Missoula, Mont., Pre L. 92, 81 Encina
Hollmann, Emil Frederic : San Jose, Educ. 102, 56 Encina
Holmes, Alma : Los Angeles, Psych. 78, 11 Salvatierra
Holt, Inezetta : Redding, Hist. 10, 63 Roble
Hook, Bertha Louise : San Bernardino, Germ. 87, 176 Bryant P
[1]Hook, Joseph Stanley : Perris, Geol. gr., 182 Encina
A. B., Stanford, 1910.
[1]Hoover, Bessie Belle : Palo Alto, Engl. gr., 321 Melville P
A. B., Stanford, 1910.
Horine, George Leslie : Palo Alto, CE.8, Embarcadero&BryantP
[2]Horine, Theo Marguerite : Palo Alto, Germ.13, Kellogg&BryantP
Horiuchi, Shigehito: YamanashiKen,Japan, E. E. 11, 131 Cowper
[1]Horton, Harry Leonard : Ukiah, C. E. 139, 71 Encina
A. B., Stanford, 1911.
Horton, Marion Louise : Pasadena, Phil. 98, 1160 Bryant P
Hostettler, Burdette Lord : Erie, Pa., M. E. sp. 90, Acacia
Houghton, Harry Sumner : Santa Cruz, C. E. 35, Kappa Sigma
Houser, John David : Sacramento, Educ. gr., 154 Encina
A. B., Stanford, 1911.
[2]Howard, Grenville Gates : Stanford Univ., Econ. 3, 12 Dolores
Howard, Vivian Mildred : Palo Alto, Engl. 16, 222 Bryant P
Howe, Mollie Margaret : Chicago, Ill., Engl. 13, 527 Emerson P
Howell, John Wesley : Los Angeles, Pre L. 73, Beta Theta Pi
Howes, John Gaylord : El Centro, Pre L. 13, 542 Cowper
Howland, Leon David : Milton, Ore., C. E. 112, 25 Encina
Hubbard, Herbert Lincoln : Redlands, Econ. 70, 187 Encina
Hudson, Elmer Franklin : San Jose, E. E. 12, 175 S. 13th S. J. S
Hudson, Frederick Ross : Watsonville, Pre L. 40, 131 Encina
Hughes, Jennie Sherwood : Oakland, Graph. gr., 10 Roble
A. B., Stanford, 1910.
Hughes, Julian Martin : Portland, Ore., Econ. 7, Zeta Psi
Hughes, Ralph Leon Jr. : Salinas, C. E. gr., Pine Cottage
A. B., Stanford, 1910.
Hulburt, George Perry : Hollywood, E. E. 53, 925 Waverley P
[1]Hulsman, Evelyn Clara : Susanville, Engl. 91, 16 Alvarado
Humphrey, Harry Frank : Santa Ana, Geol. 103, 173 Encina
Huneke, Vaughn : Tyrone, N. M., Math. 9, 5 Lasuen
Hunley, John Berdell : Newton, Wn., Geol. 7, 405 Emerson P
Hunt, George Walter : San Jose, C. E. sp. 54, 19 Encina
[1]Huntsberger, Harold Kessler : Los Angeles, PreL.60, DeltaKappaEpsilon

Hurd, Helen Josephine : Los Angeles,	Engl. 14,	Madroño
Hurd, Joseph Duke : Salt Lake City, U.,	Pre L. 45,	5 Lasuen
Hurlbut, Lola : Madison,	Engl. 14,	16 Alvarado
Hutchinson, Edith May : Los Angeles,	Hist. † 10,	Gamma Phi Beta
Hutchinson, Joseph Kellogg : Palo Alto,	Law sp. 39,	403 Kingsley P
Hutchinson, Ruth : Los Angeles,	Hist. 63,	Gamma Phi Beta
Hutton, S. Miller : San Francisco, A. B., Princeton University, 1902.	Law gr.,	704 Bryant P
Ingelow, George Carpenter : Banning,	Hist. sp. 38,	153 Encina
Ingraham, Irving I. : Bristol, Conn.,	Hist.sp.29,	Delta Kappa Epsil'n
[1]Ingram, Chester Thornton : Los Angeles,	Pre L. 7,	Sigma Nu
Ingram, Karl Culton : Gilroy,	Pre L. 34,	Phi Kappa Psi
Ireland, Edith McCoy : Los Angeles,	Hist. † 10,	Gamma Phi Beta
Isakson, Carl Oscar : Portland, Ore.,	C. E. 15,	College Terrace
Jack, Julian Riette : Glendale,	C. E. 35,	Theta Delta Chi
[1]Jack, Norman Michel : Los Angeles,	Law sp. 37,	Beta Theta Pi
Jackson, Edgar Alden : Cupertino,	E. E. 44,	Cupertino C
Jackson, Edna LaVone : Boise, Idaho,	Engl. 16,	16 Alvarado
Jackson, Ethel May : Palo Alto,	Graph. 35,	16 Alvarado P
Jackson, Lawrence Burch : New York, N. Y.,	Engl. 96,	20 Lasuen
Jackson, Marie Herbert : Los Angeles,	Hist. 107,	20 Roble
Jacob, Lina Stella : Palo Alto,	Germ. 13,	801 Middlefield P
[1]Jacobi, Aaron Leonard : San Francisco,	Pre L. 84	14 Encina
Jacobs, Charles Louis : San Jose,	Educ. 96,	303 E.S.F., S.J. S
James, Leander L. Jr. : Fairbanks, Alaska.,	Law sp. 2,	Beta Theta Pi
[1]James, Myrtle Hodge : Santa Monica, A. B., Stanford, 1911.	Germ. 123,	47 Roble
[1]Jameson, Charlotte Alvah : San Jose,	Engl. 12,	70 E. Julian S. J. S
Jenkins, Alice Mabel : Stanford Univ.,	Phyl. 120,	3 Lasuen
Jenkins, Leonard R. : Ogden, Utah,	Phyl. 42,	718 Bryant P
Jenkins, Olaf Pitt : Stanford Univ.,	Geol. 36,	3 Lasuen
[1]Jensen, James Oliver : Palo Alto,	E. E. sp. 29,	520 Everett P
Jesson, Robert Harold : Ontario,	C. E. 103,	Encina
Johnson, Carrie Jette : Pacific Grove,	Hist. 83,	437 Kipling P
Johnson, Charles Rodgers : San Francisco,	C. E. 23,	Mayfield
[2]Johnson, Frances Mary : San Jose,	Engl. 11,	447 N. 2nd S. J. S
[1]Johnson, Fred'k Monroe : San Francisco,	Econ. 65,	Beta Theta Pi
Johnson, James Rowland : San Jose,	E. E. 126,	R. D. 21 S. J. S
Johnson, Rowland Bryant : Redlands,	M. E. 14,	Encina
Johnson, Walter Harold : San Jose,	C. E. 87,	658 Stockton S. J. S
[1]Johnston, Angus Jr. : Colton, A. B., Stanford, 1911.	Econ. 121,	32 Encina

Johnston, Carl Edward : Los Altos, Ent. 74, Los Altos
Johnston, Faber Laine : San Jose, PreL.33, Sigma Alpha Epsilon
[1]Johnston, Hazel May : San Jose, Hist. 120, Alpha Phi
A. B., Stanford, 1911.

[1]Johnston, Petra Beatrice : Redwood City, Germ. 40, Redwood City R
Johnston, Walter Foster : Everett, Wash., Pre L. 49, 50 Encina
[2]Jolivette, Hally D. M. : La Crosse, Wis., Bot. gr., 16 Alvarado
A. B., University of Wisconsin, 1906; A. M., 1909.

Jones, Dorette : Seattle, Wn., Germ. 13, 21 Lasuen
Jones, James Walter : La Porte, Educ. 59, 4 Salvatierra
Jones, John Joseph : Santa Clara, Pre L. † 15, Santa Clara S
A. B., Santa Clara College, 1908.

Jones, Louis Hollister : Pasadena, Sys. Bot. 79, Phi Kappa Psi
Jones, Preston Matthew : Palo Alto, C. E. 33, 471 Channing P
[1]Jordan, Guy Wilfred : Colton, Chem. 56, 100 Encina
Jordan, Knight Starr : Stanford Univ., Geol. 121, Delta Upsilon
de Journel, Robert : Burlingame, Pre L. 8, Burlingame B
Judah, Marion S. : Los Angeles, Germ. 46, Alpha Phi
Junge, Marie Elizabeth : Bigspring, Neb., Phyl. 76, 603 Lytton P
[2]Kassebaum, Henry Adams : Alameda, Geol. sp., Chi Psi
Kauffman, Harlan Brice : Oregon, Ill., Econ. 72, Delta Kappa Epsilon
Kauffman, Karl Ferris : Los Angeles, E. E. 11, Delta Kappa Epsilon
Kauffman, Marguerite Edna : Los Angeles, Hist. 107, 11 Salvatierra
Kay, Willard E. Jr. : Ogden, Utah, Phyl. 79, 718 Bryant
Kearne, John Stuart : Riverside, C. E. 11, 328 Churchill P
Kearns, Harold John : Oakland, PreL.14, Delta Kappa Epsilon
Keefer, Chauncey Tennent : Los Angeles, M. E. sp. 45, 101 Encina
Keesling, Hector : San Jose, E. E. 115, Sigma Nu
Keesling, Louis : San Jose, Pre L., Sigma Nu
Kellar, Herbert Anthony : Peoria, Ill., Hist. gr., Manzanita Hall P
A. B., University of Chicago, 1909.

[1]Keller, Arnold : Arleta, Ore., E. E. 13, College Terrace
Keller, Norma Grace : Ahmira, Wn., Germ. 102, 21 Lasuen
Kelly, Edith Louise : Oakland, Germ. gr., 324 Emerson P
A. B., Stanford, 1911.

[1]Kelly, Laurence Corbett: Winnipeg, Can., Econ. 102, Phi Kappa Psi
Kemp, Madge Rose : Sausalito, Hist. † 9, Alpha Omicron Pi
Kennard, Ada Marie : Redlands, Graph. 56, 611 Bryant P
Kennedy, Bessie Esther : Rhyolite, Nev., Engl. 14, 16 Alvarado
Kennedy, Evelyn M. : Palo Alto, Hist. 61, 851 University P
Kennedy, Louis Rex : Orange, C. E. 75, Kappa Alpha

Kennedy, Stanley C. : Honolulu, T. H., Econ. 70, Phi Kappa Psi
Kenney, Pearl Madeline : Long Beach, Engl. 10, Vining Bldg. P
Kern, Eugene Francis : Piedmont, Econ. 34, Beta Theta Pi
Ketelsen, Carl Cornelius : Rhyolite, Nev., Geol. 10, 317 High P
Keyston, Garton Donald : San Francisco, Econ. 77, 93 Encina
Kile, Joseph Horton : Stockton, Econ. 10, 192 Encina
[2]Kilpatrick, Frank Clark : Los Angeles, E. E. sp., Phi Gamma Delta
[2]Kimball, Elene Sophia : Eureka, Frn., Roble
Kimura, Minnie Ruth : Palo Alto, Graph. 13, 333 Waverley P
King, Alfred Thomas : San Luis Obispo, Graph. 63, 429 Forest P
King, Lyman Stevenson : Oakland, M.E.72, SigmaAlphaEpsilon
King, Marion Reginald : Porterville, Phyl. 11, 403 Alma P
Kirkwood, Marion Rice : Mountain View, Law gr., Mountain View M
A. B., Stanford, 1909.
Kistler, Jessie Rua : Covina, Engl. gr., 14 Salvatierra
A. B., Stanford, 1911.
Kitagawa, Kay Jiro : Kioto, Japan, Phyl. 12, 1047 Ramona P
Knapp, Bertha Jane : Tehachapi, Hist. gr., Alpha Omicron Pi
A. B., Stanford, 1910.
Knight, Courtland Whitney : Pasadena, Pre L. 10, Phi Gamma Delta
Knight, Earle : Chicago, Ill., Chem. 10, Delta Upsilon
Knight, Harold Pratt : Pasadena, Chem. 107, PhiGammaDelta
Knollin, Ernesto Ray : Auburn, N. Y., Educ. 42, 194 Encina
Knollin, Herbert Edward : Auburn, N. Y., Educ. gr., 51 Encina
A. B., Stanford, 1911.
Knowlton, Philip Arnold : Stanford Univ., Lat. gr., 20 Lasuen
A. B., University of Wisconsin, 1906 A. M., 1908.
Knox, Marguerite Regina : Los Angeles, Frn. 102 Alpha Omicron Pi
[1]Koenig, John Ernest : San Jose, Pre L. sp., Chi Psi
[2]Koontz, John Andrew : Palo Alto, E. E., gr., 221 Bryant P
A. B., Stanford, 1908.
Krause, Stella Josephine : San Diego, Lat. 103, Madroño
[1]Krost, Gerard N. : Crown Point, Ind., Anat. †, 17 Alvarado
Kuno, Emma Ellen : Berkeley, Hist. gr., 315 Alma P
A. B., Stanford, 1911.
Kusunoki, Miyozo : Palo Alto, Hist. sp. 12, 420 Everett P
Kuykendall, Ralph Simpson : San Jose, Hist. gr., Univ.PacificS.J. S
A. B., University of Pacific, 1910.
Lacey, Gladys Vivian : Salinas, Hist. 85, Delta Delta Delta
Lacey, William Noble : San Diego Chem. 104, 34 Encina
Lada, Paul Frank H. : Denver, Colo., C. E. 103, 14 Encina

[2]Lagerstedt, Albert : Gibbon, Minn., A. B., University of Minnesota, 1907.	Hist. gr., Mariposa Hotel
La Grange, George Erwin : Redlands,	Pre L. 114, 3 Encina
Laird, William Aikin : Lindsay,	C. E. 45, College Terrace
Lake, Harrison Morton : San Francisco,	Phyl. 65 140 Encina
Lake, Jarrett Townsend : Redlands,	E. E. 86, 89 Encina
Lambert, Lewis Raymond : Suisun Valley,	Law sp. 35, College Terrace
[2]Landers, Marjorie Ella : Bakersfield,	Math. 17, 58 Roble
[1]Landis, Earl Ellsworth : Colesburg, Ia.,	Econ.sp.2, Faculty Club Hs
Laney, Lynn M. : Berkeley. B. L., University of California, 1909.	Law gr., Delta Chi
[2]Lang, Louis Arthur : San Luis Obispo,	E. E. sp., 318 Emerson P
Lanktree, Elizabeth F. : Stanford Univ.,	Psych. 100, 14 Salvatierra
Lantz, Grover Berner : Colton,	Geol. 54, 23 Encina
Larkin, Gail Carhart : Los Angeles,	Pre L. 73, 187 Encina
Lasky, Bernard Harold : San Francisco,	Geol. 61, 89 Encina
Lau, Say-Kan : Honolulu, T. H.,	C. E., 20, 257 Byron
Laughlin, Gerald Francis : Boise, Idaho,	Phyl. 5, 405 Emerson P
[2]Laumeister, Emma Loveland : Palo Alto,	Engl. 13, Alpha Phi
Lawrence, George Louis : Modesto,	Span. 61, 419 Waverley P
Lawson, Edith : Sacramento, A. B., Stanford, 1910.	Engl. gr., Delta Delta Delta
Leach, Charles Nelson : Stanford Univ., A. B., Stanford, 1910.	Med. gr., 257 University P
Leaf, Erle Mervin : San Jose, A. B., Stanford, 1910.	Law gr., Delta Chi
Leaman, James Buchanan Jr. : San Jose,	Pre L. 43, 129 Encina
Le Count, Clarence Milton : Clark, S. D.,	E. E. 102 133 Encina
Lee, Bradner Wells Jr. : Los Angeles,	PreL.83, DeltaKappaEpsilon
[1]Lee, David : San Francisco,	Hist. 68 12 Cabrillo
Lee, Gladys Margaret : Los Angeles,	Hist. 12, Madroño
Lee, Kenyon Farrar : Los Angeles,	PreL.40, DeltaKappaEpsilon
Leeds, Jacob Howard : San Diego,	E. E. 103, Kappa Alpha
Legge, Frances Lynette : Pasadena,	Engl.105, KappaAlphaTheta
Leib, Earl Russell Warren : San Jose,	Geol. 86, Zeta Psi
Lener, Kasper : San Jose,	PreL.sp.49, 520W.S.S.S.J. S
[1]Lenfest, Calvin Ray : Los Gatos,	Econ. 73, 840 Bryant P
Lengfeld, Louis : San Francisco,	Econ. 93, 82 Encina
[1]Lenox, Lionel Tracy : Mountain View,	Bot. 24, Mountain View
Lever, Marcia Brucker : Redlands, A. B., Stanford, 1910.	Engl. gr., 18 Roble

[1]Levy, Joe Paul : Hueneme, Econ. 126, 151 Encina
A. B., Stanford, 1911.

Levy, Karl Riffle : Los Angeles, Pre L. 45, 37 Encina
Levy, Paul Mark : San Francisco, Chem. 60, 30 Encina
[1]Levy, Theodore Martin : San Francisco, Pre L. 30, 37 Encina
Lewis, Charles Granville : Pacific Grove, C. E. 67, 185 Encina
[2]Lewis, James Ogier : Pacific Grove, Geol. 107, Pacific Grove P
Lewis, Lester Warren Jr. : Seattle, Wn., Econ. 10, Kappa Sigma
Lewis, Walter Kinney : Riverside, Pre L. 10, 19 Lasuen
Lincoln, Preston S. : New York, N. Y., Law gr., 19 Lasuen
B. S., New York University, 1909; LL. B., 1910.

Lingo, Oscar Roy : Los Angeles, Engl. sp. 10, 29 Salvatierra
Little, Edward Antes : Wichita, Kans., Law gr., Delta Tau Delta
A. B., Stanford, 1910.

Little, George Barnard : Whittier, C. E. sp. 10, Phi Kappa Psi
[2]de la Llata, Roland : Mexico City, Mex., M. E., 531 Cowper P
Lockwood, Marie E. : Pasadena, Econ., Pi Beta Phi
Loel, Wayne Frederick : Saratoga, E. E. 18, 143 Encina
Loftus, Frances : Eagle Rock, Hist. 32, Pi Beta Phi
Logan, William Anthony : La Honda, Pre L. 12, Mountain View M
[1]Long, Eda Lillian : Montpelier. Engl. 121, 39 Roble
A. B., Stanford, 1911.

Long, Lydia : Hayward, Hist. 42, Madroño
Long, Mabel Jo : Boise, Idaho, Germ. 42, Delta Delta Delta
[1]Long, Royce Reed : Palo Alto, Med. gr., 853 Channing P
A. B., Stanford, 1908.

Longueville, Joseph Charles : Dubuque, Ia., Hist. 35, Phi Kappa Psi
Looney, Susan Marie : Palo Alto, Educ. gr., 416 Webster P
A. B., Stanford, 1911.

[1]Lotz, Cyril Clyde : San Jose, Pre L. 42, 116 S. 4th S. J. S
Loud, Henry Lawrence : Pomona, Pre L. 47, 128 Encina
Lough, Herbert M. : Grand Junc., Colo., Econ. 11, 339 Emerson P
Lovering, Gladys Laverne : San Jose, Hist. 23, 63 Roble
Low, Apau Paul : Honolulu, T. H., C. E., 21, 446 Hamilton
[1]Low, Isabel Tura : Green Mountain, Ia., Germ. 124, 257 Byron P
A. B., Stanford, 1911.

Lowman, Sheda Amy : Los Angeles, Hist. 60, Alpha Omicron Pi
Luis, Franklin Alfred : Salinas, Geol. 29, Stanford Inn
Luker, Benjamin Franklin: Proctor, Texas, Frn. gr., 711 Cowper P
A. B., Washington and Lee University, 1909; A. M., 1910.

Lull, Linford C. Jr. : Los Angeles, E. E. 51, Sigma Nu

[1]Lumsden, Treve Berlin : Los Angeles. Econ. 28, Kappa Alpha
Luscombe, Carl Blackwell : Carthage, Mo., E. E. 14, 15 Alvarado
Luther, Martin : San Jose, Econ. 9, SigmaAlphaEpsilon
Lyne, Henry Stephens : Toorak, Aust., Geol. 77, 407 Waverley
McCann, Eugene Garrison : Los Angeles, E. E. 134, 44 Encina
McCann, Robert James : Pacific Grove, Geol. 61, 407 Waverley P
McCarthy, Mary Louise : Honolulu, T. H., Engl. 60, 25 Roble
McCartney, Flora G. : Sioux Falls, S. D., Hist. 37, 930 Scott P
MacClain, Warren Kenneth : Palo Alto, M. E. 15, 317 High P
McClurg, Lena Marie : Los Angeles, Graph. 35, Pi Beta Phi
McConnel, David Rose : Brisbane, Aust., Educ. gr. 500 PaloAltoAv. P
M. A., University of Edinburgh, 1878.
McConnell, Albert Reynolds : Durango Colo. Graph. 36, Delta Tau Delta
McCorkle, Paul Clarendon : Escondido, E. E. 40, 804 Bryant P
MacCormac, Josephine V. : Palo Alto, Grk. 98, Castilleja School P
McCormack, May E. : Tacoma, Wn, Engl. 33, 1 Alvarado
McCourt, Virgil Wellington : Sacramento, Econ. sp. 3, S. Alpha Epsilon
McCowen, Hale Jr. : Ukiah, Law gr., 141 Encina
A. B., Stanford, 1911.
McCrea, John Daniel : Redwood City, C. E. 10, Redwood City R
McCready, Harry Lewis : Palo Alto, C. E. sp. 60, 633 Channing P
[2]McCullough, A. Stafford : Clifton, O., Chem. 92, 627 Emerson P
McDaniel, Robert Levi : Ogden, Utah, Econ. 30, 172 Encina
McDermott, Laura Irene : Los Altos, Chem. 94, Los Altos L
McDermott, Ora Martina : Tucson, Ariz., Engl. † 18, Delta Delta Delta
McDonald, Clarence Chester : Woodland, Pre L. 78, 35 Encina
McDonald, John Lewis : San Jose, M. E. 14, 196 Encina
McDougal, Latham Eastman : Belmont, C. E. 99, Belmont B
McEwen, George Francis : Palo Alto, Phys. gr., 660 Homer P
A. B., Stanford, 1908.
[1]McEwen, Murray Eugene : Burlingame, Econ. sp., Kappa Sigma
McGilvray, Walter Scott : Stanford Univ., Chem. 98, Escondite Cottage
McGonigle, Rose Vibiana : Los Angeles, Hist.14, 207 Hawthorne P
[1]McGuire, Hollister Booth : Portland, Ore. Pre L. 38, Sigma Chi
McHenry, Beatrice : Olympia, Wash., Hist. 108, 24 Roble
A. B., Union Christian College, 1909.
McInerny, James Edmund : Los Angeles, Econ. 46, Delta Tau Delta
McKay, George : Hardy, C. E. 64, 71 Encina
McKee, Abigail Frances : San Jose, Lat. gr., 16 Alvarado
A. B., Stanford, 1910.
McKee, Paul Boole : San Francisco, E. E., 527 Everett P

McKendry, Ramona : Palo Alto, Hist. 21, 1035 Bryant P
McKeown, Edward Lawrence: San Martin, Pre L. 108, 54 Encina
McKinney, Verne Willson : Palo Alto, C. E. 11, 620 Waverley P
McKnight, Harold Metcalf : Los Angeles, Pre L. 21, D.KappaEpsilon
McLachlan, Anita Jean : Pasadena, Hist. 105, Kappa K. Gamma
MacLachlan, Marion Allison : Palo Alto, Hist. 68, 630 Lincoln P
McMillan, Hazel May : Fallbrook, Hist. 45, 67 Roble
[2]McMillan, Percy Walton : San Jose, C. E. sp., Sigma Nu
McMillan, W. Bruce : San Jose, C. E. 112, Sigma Nu
McNabb, Mary Vera : San Bernardino, Engl. 15, Pi Beta Phi
[2]McNair, Stuart Strathy : Mayfield, Geol. †, Mayfield
McNeely, Roland : Los Angeles, Pre L. 33, Kappa Sigma
Macomber, Frank Jewell Jr. : Lewis, Iowa, Pre L. 102, Kappa Sigma
McPherron, Arnie Lilian : Hollywood, Engl. 15, 16 Madroño
Macready, Harry Ashmore : Los Angeles, Educ. † 30, Kappa Alpha
Macready, John Arthur : Los Angeles, Econ. 56, 8 Encina
Macrum, Natalie : Los Altos, Lat. 14, Los Altos L
McSherry, Eugene William : Watsonville, Pre L. 39, 95 Encina
McWethy, Jesse Robert : Rialto, C. E. 98, 169 Encina
McWilliams, Charles K.: Canon City, Colo., Chem. 77, 405 Emerson P
Mader, Constance Marie : Santa Rosa, Germ. 10, 207 Hawthorne P
Madison, Christine : Hayward, Math. 35, 14 Salvatierra
[2]Maines, Harriette Elizabeth : Los Angeles, Lat. 12, Alpha Omicron Pi
Mallory, George Henry : Santa Rosa, S. Bot. 13, 147 Emerson P
Mallory, Nathaniel Wells : Santa Rosa, Phyl. 41, 580 Addison P
[2]Maloney, Agnes Clare : Palo Alto, Hist. 12, Pi Beta Phi
Maloney, Maud Alice : Palo Alto, Graph. 37, 707 University P
Maltaner, Frank : Cincinnati, O., Chem. 42, Encina
[1]Mann, Horace : San Carlos, Geol. 125, San Carlos S
A. B., Stanford, 1911.
Mann, Leland S. : Arroyo Grande, Pre L. 93, 38 Encina
Mann, William : Helena, Mont., Ent. 104, 19 Lasuen
Manning, Edward Earle : Los Angeles, Econ. 37, Beta Theta Pi
Marcus, Louise : San Francisco, Germ. 72, 2 Roble
[1]Margo, Albert Taylor : San Francisco, C. E. 7, College Terrace
Marich, William Daniel : Redding, E. E. 13, 5 Lasuen
Marker, William Maxwell : La Mesa, E. E. 13, 405 Emerson P
Markley, Chandler Hamilton : San Jose, M. E. 10, 68 S. 1st S. J. S
[1]Marks, Lazare Henry : San Mateo, Geol. 10, Chi Psi
Marshall, James G. : White Plains, N. C., Law sp. 4, 558 Hawthorne P
Marshall, Kenneth Irving : Los Angeles, M. E. 47, 232 Lytton P

Marshall, Verna Mae : Los Angeles, Graph. 71, Pi Beta Phi
Marten, William Samuel : San Jose, Educ. gr., High School SJS
B. S., Columbia University, 1905.

Martin, John Johnston M. : So. S. Fran., Graph. 36, S. Alpha Epsilon
Martin, Thomas Powderly : Ballinger, Tex., Hist. † 14, 567 Lincoln
[1]Marvin, Cloyd Heck : Riverside, Pre L. 31, Delta Chi
Marx, Dorothy Grotecloss : Palo Alto, Engl. 108, K. Alpha Theta
Marx, Roland Grotecloss : Palo Alto, C. E. 114, 357 Kingsley P
Mason, Ruth : Mountain View, Bot. 75, Mt. View
Masters, Bertha Bell : Portland, Ore., Hist. 13, Gamma Phi Beta
Masters, William Henry : Portland, Ore., Law gr., 127 Encina
A. B., Stanford, 1909.

Mathews, James Henry : Eureka, Pre L. 7, 144 Encina
[1]Matsuoka, Shigezo : Palo Alto, Math. sp. 44, 1020 Bryant P
Matthias, Edwin Clark : Spokane, Wash., Pre L. 108, Phi Kappa Psi
Matthiessen, Marcus Martin : Campbell, Law gr., Campbell C
A. B., Harvard University, 1905.

Mattingly, Gladys Marie : San Francisco, Graph. 92, Lowell & Webster
Mayne, Bessie Jane : San Jose, Engl. 97, 1651 Ala. Av., S.J.S
Melcon, Sisag Vahram : Kingsburg, E. E. 79, 94 Encina
Melcon, Zenope Parnok : Kingsburg, E. E. 81, 94 Encina
Merrill, Carlton Horne : Los Angeles, Econ. 7, Kappa Sigma
Mersereau, Irene : Pasadena, Germ. 108, 54 Roble
Messer, Robert W. : Rockland, Me., Germ. 108, 1106 Bryant P
Metzner, Florence Prior : San Francisco, Germ. 108, Pi Beta Phi
Meyerholz, Ivan Rheinier : Cupertino, C. E. 33, Cupertino C.
Mickle, John Lloyd : Centerville, Pre L. 7, 5 Lasuen
[1]Miebach, Philip John : Lethbridge, Can., Psych. 2, 235 Emerson P
Miller, Gleed : San Francisco, Pre L. 12, 132 Encina
Miller, James Andrew : San Francisco, Pre L. 12, 715 Bryant
Miller, James Arthur : Palo Alto, E. E. 48, 580 Addison P
Miller, John Paul : Chico, Law sp. 6, 213 Emerson P
[2]Miller, John Martin : Northfork, Ent. gr., 342 Homer
A. B., Stanford, 1908.

[2]Miller, Maude Anita : Los Angeles, Frn. 100, Delta Delta Delta
Miller, Oscar Samuel : Bachlott, Ga., Pre L. † 4, 417 Emerson
Miller, R. Justin : Hanford, Pre L. 113, 157 Encina
Miller, Robert Patchen : Los Angeles, M. E. 105, Delta Tau Delta
Miller, Wilber Leroy : Covina, Phyl. 11, 153 Encina
Mills, John Herman : Palo Alto, Phyl. 78, 530 Lytton P
Mills, Sarah Matilda : National City, Engl. 103, 418 Waverley P

Mills, Wallace C. : Janesville, Wis.,	M. E. 125,	3 Encina
Millsap, Robert Elmer : Pasadena,	C. E. 79,	147 Encina
Millspaugh, Winnefred : Hollywood, A. B., Stanford, 1911.	Hist. gr.,	KappaAlphaTheta
[1]Minturn, LeRoy : Fresno,	E.E.104,	DeltaKappaEpsilon
Missner, Frank Roy Stewart : Lincoln,	Phyl. 41,	167 Encina
Mitchel, Glen Henry : Los Angeles,	Econ. 8,	Kappa Sigma
[2]Mitchell, De Witt Charles : San Diego,	Pre L.83,	DeltaKappaEpsilon
[1]Mitchell, Frances Anne : Montebello,	Hist. † 73,	1 Alvarado
Mitchell, Merle Ellsworth : Santa Rosa,	Pre L. 93,	1 Encina
Mitchell, Standish Low : Los Angeles,	Econ. 34,	Zeta Psi
Mochizuki, Kazumara : San Mateo,	Econ. 100,	Japanese Club
Moffitt, George Wilber : Palo Alto, A. B., University of Iowa, 1910.	Phys. gr.,	549 Cowper P
Moise, Nina Ethel : San Francisco,	Hist. 77,	11 Madroño
Monroe, Helen : Denver, Colo.,	Frn. 101,	KappaAlphaTheta
Monsch, David Frank : Los Angeles,	Lat. 7,	724 Bryant P
Montague, Helene : Los Angeles,	Hist. 63,	Alpha Omicron Pi
[1]Monteath, Catherine : Tonopah, Nev.,	Engl. 10,	628 Cowper P
Montgomery, Como : Nashville, Tenn.,	Engl. 104,	651 Waverley P
Moore, Courtney L. : Monterey,	Law sp. 57,	Chi Psi
Moore, Julia Eugenia : Piedmont,	Frn. 75,	Pi Beta Phi
Moore, Virginia : Los Gatos,	Hist. 67,	Alpha Omicron Pi
[1]Moorhead, Leon Shepard : Hollywood,	M. E. 7,	334 Waverley
Morgan, Edith Therese : Columbia,	Engl. 103,	26 Madroño
Morgan, Gladys Myfanwy : San Diego,	Phyl. 88,	5 Madroño
Morgan, Harry Joseph : Los Angeles,	Chem. 12,	16 Salvatierra
Morgan, Harold Sydney : San Diego,	Phyl. 79,	Phi Delta Theta
Morgan, Ralph Stoneberger : Los Angeles,	Econ. 45,	Ville de Lagunita
[2]Morin, Harriette Lucile : San Francisco,	Engl.,	25 Roble
Morris, Samuel Brooks : Pasadena,	C. E. 111,	78 Encina
[1]Morrison, George David : San Francisco, A. B., Stanford, 1911.	Econ. 120,	156 Encina
Morrison, Harold : Indianapolis, Ind.,	Ent. 47,	College Terrace
Morrison, Maurice Everard : Morgan Hill,	C. E. 45,	College Terrace
Morrow, Osborn Belt : Portland, Ore.,	M. E. sp. 10,	S.AlphaEpsilon
Morse, Evelyn : Lodi,	Hist. 21,	15 Madroño
Morton, Frank Willard : San Francisco,	Engl. 12,	707 Bryant P
Mosher, Hugh Harold : San Jose,	Chem45,201	S.CrittendenSJ.S
Mullen, Homer Alfred : Jefferson, Ohio,	E. E. 82,	859 Lytton P
Mulock, Kate Gray : San Gabriel,	Hist. 65,	43 Roble

Munger, Arthur Lee Jr. : San Francisco, Med. gr., 2005 Calif. S. F. S
A. B., Stanford, 1910.

[1]Munger, Frieda M. Hauswirth : Palo Alto, Engl. gr., 374 Kingsley P
A. B., Stanford, 1910.

Murakami, Yoshi : Ehima, Japan, M. E. 106, Japanese Club
Murphey, Elizabeth Ella : Tucson, Ariz., Hist. 89, Delta Delta Delta
[1]Murray, Alfred Conklin : Woodland, Pre L. 49, 53 Encina
Murray, George Harvey : Hanford, Pre L. 12, 71 Encina
Murray, Hamilton : San Gabriel, Engl. † 15, 19 Lasuen
Murray, Robert Lindley : Palo Alto, C. E. 50, 1019 Bryant P
Murray, Welwood Gourlay : Seattle, Wn., Pre L. † 6, Delta Chi
Myer, Arthur Henry : San Francisco, Chem. gr., 161 Encina
A. B., Stanford, 1910.

Myers, Ralph Cather : Bakersfield, C. E. 10, 57 Encina
Nagel, Helen May : Davenport, Ia., Chem. 101, 27 Madroño
[2]Nagel, Minna Ivy : Palo Alto, Hist. 14, 256 Addison P
Nakamura, Yuichi : Palo Alto, E. E. 12, 365 Lincoln P
Nakayama, Shonosuke : Tokyo, Japan, Ent. sp. 13, 217 Encina
Narver, David Lee : Los Angeles, C. E. 11, S.AlphaEpsilon
[1]Nazro, John : San Jose, M. E. 30, 121 S. 8th S. J.
Neal, Helen : Belmont, Hist.53, KappaKappaGamma
Needham, Guy Evan : Tracy, Engl. 45, 2 Lasuen
Neel, Beula Jane : Ventura, Bot. 14, Kappa Alpha Theta
[2]Nelson, Clara Ruth : Monrovia, Span. 15, 15 Roble
Nelson, Ernest Bruce : San Jose, Graph. 60, Kappa Alpha
Nelson, Hans Christian : Fields Landing, Law gr., 130 Encina
A. B., Stanford, 1910.

Nemechek, Rudolph Joseph : Los Angeles, C. E. 95, 219 Ramona P
Nesbitt, Chetanna Maud : Vallejo, Hist. 60, Alpha Omicron Pi
Newcomer, Erval Jackson : Palo Alto, Ent. 107, 20 Encina
Newcomer, Mabel : Palo Alto, Hist. 43, 1015 ForestCourtP
Newkirk, Mary Alada : Bisbee, Ariz., Span. † 15, 38 Roble
Newman, Carl Emory : Madera, Hist. 59, 24 Lasuen
Newman, Margaret E. : Santa Barbara, Engl. 14, 36 Roble
Newman, Ollis Willard : Santa Barbara, S. Bot. 41, 92 Encina
Newman, Rea Cambridge : Santa Barbara, E. E. 46, 16 Salvatierra
Newman, Willard Hodges : San Diego, Pre L. 64, Delta Chi
Newton, Douglass Erle : Woodbridge, Hist. 82, 121 Encina
Nichols, C. Fenton : San Francisco, Pre L. 44, 4 Lasuen
[1]Nichols, Owen H. : Boone, Neb., E. E. sp. 33, CollegeTerrace
Nichols, Viola Beatrice : Pasadena, Bot. 71, 26 Roble
Nickels, Harrison C. : Minneapolis, Minn., Pre L. 7, Chi Psi

Niebel, Herbert Lee : Cleveland, O.,	C. E. 13,	335 Lytton P
Nielsen, Minnie : Palo Alto,	Graph. 24,	327 Hamilton P
Nimmo, Leroy Coon : Los Angeles,	E. E. 128,	Phi Gamma Delta
Nims, Helen Louise : San Jose,	Educ. 15,	320S. WhitneyS.J.S
Noble, Isabel Blake : Long Beach,	Lat. 106,	Pi Beta Phi
Noble, Ralph M. : Galesburg, Ill.,	App.Math. † 8,	804 Bryant P
Nobs, Walter Rudolf : Redwood City,	Geol. 38,	Redwood City R
Nolan, Edward Dana : San Luis Obispo,	Geol. 102,	134 Encina
Nomura, Hanji : Kobe, Japan,	Engl. 18,	Japanese Club
North, Frances : Cupertino,	Engl. 15,	Cupertino C
Nowell, Patterson Dana : Tulare,	Pre L. 45,	9 Cabrillo
Null, George Wallace : San Jose,	C. E. 16,	547 S. 9th, S. J.
Nunan, Cyril Raymond : Stockton,	Pre L. 75,	Phi Delta Theta
[1]Obear, Maurice : St. Louis, Mo.,	C. E. sp. 51,	Beta Theta Pi
Ober, Florence Sophia : St. Paul, Minn.,	Germ. 46,	727 Bryant P
O'Donnell, Bernard Julius : Monterey,	Law sp. 26,	144 Encina
Ogier, Elizabeth Hargest : San Jose, A. B., Stanford, 1911.	Graph. gr.,	28 Madroño
[1]Ogilvie, Paul Morgan : Los Angeles,	Pre L. 93,	Sigma Chi
[2]Ohashi, Rikizo : Kumamoto, Japan,	Econ. sp.,	227 Encina
Ohashi, Yasu-Saburo : Tokyo, Japan,	E. E. 80,	Japanese Club
[1]Oliver, Frederick Hartman : Clinton, Ill., A. B., Stanford, 1911.	C. E. 120,	Delta Upsilon
Oliver, Jean Redman : Chico,	Phyl.-Med. 100,	Encina
Olmstead, Clarence Edward : Los Angeles,	Geol. 11,	Kappa Sigma
Olmstead, Roger Wolcott : Los Angeles,	C. E. 51,	67 Encina
Olsen, Louis : Palo Alto,	C. E. 15,	321 Fulton P
O'Neill, Marjorie Edith : Morgan Hill,	Germ. 12,	22 Lasuen
O'Neill, Mervyn John : Belmont,	Econ. 12,	Belmont B
Oppenheimer, Leon I. : Spokane, Wash.,	Phyl. 37,	262 Kingsley P
Oppenheimer, Sade : Spokane, Wash., A. B., Stanford, 1910.	Engl. gr.,	262 Kingsley P
Orange, Verne Campbell : Pueblo, Colo.,	M. E. sp. 8,	349 Kipling P
Orr, Florence Jennings : San Francisco,	Hist. 58,	K. Kappa Gamma
Oshima, Sho : Naokichi, Japan,	Phil. 45,	943 Bryant P
Ostenberg, Zeno : San Jose,	Chem. 46,	164 Hamilton P
[2]Otis, Arthur Sinton : Pasadena, A. B., Stanford, 1910.	Educ. gr.,	197 Encina
Overman, Ruth : Santa Barbara,	Graph. 72,	58 Roble
Owen, Ethel : Los Gatos,	Phyl. 8,	9 Roble
Owen, Henry Dorrance : Stockton,	C. E. 95,	Sigma Chi

Owens, William Brownlee : San Jose,	Pre L. 9,	22 Kingsley
[1]Oyuki, Masanosuke : Los Angeles,	Econ. sp. 20,	735 Ramona P
Ozier, Stanley Nelson : Los Angeles,	Econ. 6,	Sigma Chi
Packard, Henry Jessup : Ontario,	Geol. 103,	178 Encina
Paine, John Howard : Palo Alto,	Ent. 75,	80 Encina
Paine, Russell : Redlands,	Phyl-Med. 93,	832 Kipling P
Palmer, Arthur Wheatley : Claremont,	Pre L. †,	171 Encina
Palmer, Frank Edwin : Ellensburg, Wn.,	Pre L. 9,	24 Lasuen
[1]Panhoe, Henry Aki : Kamuela, T. H.,	C. E. † 4,	27 Salvatierra
Park, Carl Joseph : Palo Alto,	Educ. 56,	51 Encina
Park, Charles V. : Kidder, Mo.,	Econ. gr.,	225 Homer P
A. B., Stanford, 1909.		
Park, Harriet : Palo Alto,	Graph. 108,	40 Roble
Parker, Thomas Harry : San Francisco,	E. E. sp. 12,	327 Emerson P
Parkinson, Mary Dorothy : Los Angeles,	Germ. 45,	Alpha Phi
Parmelee, Harvey Wright : Santa Barbara,	Geol. 68,	110 Encina
Parsons, Benjamin Everett : Highland,	Geol. 103,	Encina
Parsons, Maurice Giesy : Claremont,	C. E. 107,	159 Encina
[1]Partridge, John Frederick : Alameda,	C. E. 82, S.	Alpha Epsilon
Patterson, Lee : Portland, Ore.,	Geol. 24,	Chi Psi
Patterson, William Herbert : Palo Alto,	Law gr.,	Palo Alto P
A. B., Stanford, 1910.		
[1]Patton, Arthur Lindsey : Annada, Mo.,	Law gr.,	660 Waverley P
A. B., Christian Union College, 1910.		
Paul, Chester Francis : Ely, Nev.,	Econ. 41,	358 Homer P
[1]Paulson, Archie Martin : Los Angeles,	Pre L. 2,	Theta Delta Chi
Payne, Ira Dawson : Morgan Hill,	Educ. 97,	117 Encina
Peabody, Clarence Carlyn : Ontario,	Chem. 25,	Sigma Chi
[1]Peake, Alonzo William : Redondo,	Geol. 83,	54 Encina
Peck, Edward Lawrence : Pasadena,	M. E. sp. 46,	170 Encina
Peck, Gladys Amiel : Pasadena,	Lat. 93,	251 Emerson P
[2]Peck, Sedley Clarendale : Compton,	Pre L. 56,	Sigma Chi
Peckham, Arthur Bixio : San Jose,	Geol. 108,	74 N.12thSt.S.J.S
Peckham, Ignatius Martin : San Jose,	Pre L. 109,	74N12thSt.S.J.S
Pellas, Silvius Frederick : San Mateo,	Geol. 16,	Phi Kappa Psi
Pelton, Herbert Edmun : Reno, Nev.,	E. E. 85,	25 Salvatierra
Pemberton, Cyril E. : San Francisco,	Ent. gr.,	18th&Ashbury,S.F.
A. B., Stanford, 1911.		
[1]Pemberton, John Rothwell : San Francisco,	Geol. gr.,	Kappa Alpha
A. B., Stanford, 1909.		
Pencovic, David Herman : San Francisco,	Chem. † 3,	19 Lasuen

Perdew, William Edward : Visalia, Chem. 116, 36 Encina
Perkins, Charles Timothy : Alameda, E. E. 8, 16 Salvatierra
[1]Perkins, Rollin Morris : San Bernardino, Law gr., 11 Alvarado
A. B., University of Kansas, 1910.
Perry, George Dorn : Sandusky, O., Hist. 87, 318 Emerson P
[2]Perry, Wilfred Sprague : Waterbury, Conn. Econ. 108, 412 Kipling
Person, Harry Robert : Redlands, Pre L. 54, Delta Chi
Peters, Jerome Deveraux : San Jose, Pre L. † 8, Delta Upsilon
A. B., Santa Clara College, 1908; A. M., 1909.
Petersen, Walter Edward : Santa Barbara, E. E. 44, 2 Lasuen
Phelps, Céleste : Los Angeles, Hist. 13, Alpha Phi
Phillips, Alfred Liles : Santa Cruz, Chem. 45, Delta Tau Delta
Phillips, Raymond Millard : Los Angeles, Pre L. 12, 430 Kipling P
Pickering, Loring Crothers F. : San Fran., Engl. 68, 1327 Byron P
Pier, Paul Albert : Los Gatos, Pre L. 15, Delta Chi
Pierce, Margaret Norton : San Diego, Graph. 13, KappaAlphaTheta
Pierpont, Austen : Nordhoff, C. E. 38, 21 Encina
Piggott, Helen Winifred : San Luis Obispo, Hist. 108, Delta Delta Delta
Pingree, Louis William : Ogden, Utah, Chem. 76, 96 Encina
Piper, Will Bruce : Prescott, Ariz., C. E. 11, 179 Encina
Pixley, Alma : Orange, Germ. 105, Madroño
[1]Platt, Amy Loraine : San Francisco, Germ. 46, 56 Roble
Plummer, Edna : San Jose, Math. 15, 546 S. 2nd S. J. S
[1]Polak, Anna Louise : San Jose, Germ30,Cherry&WillowSJ.S
Polhemus, James Henry : Portland, Ore., C. E. 127, Kappa Sigma
Polson, George Washington : Menlo Park, E. E. 56, Menlo Park M.
Pomeroy, Frank Kenneth : Palo Alto, Phyl. 90, 947 Waverley P
Porter, Durham White : Los Angeles, C. E. 8, Sigma Chi
Porter, Estelle Caswell : San Fernando, Frn. 105, Alpha Phi
Porterfield, Wilson C. : Silver City,N.M., Law sp. 33, 177 Encina
Post, Fred Dan : Rockford, Ill., Chem. 86, 191 Encina
[2]Post, Henry Bolton : Palo Alto, C. E. 60, 1112 Ramona P
Post, Morgie Adelia : Monrovia, Hist. 44, Alpha Phi
Postma, George Ezinha : Muncie, Ind., Chem. 75, 16 Salvatierra
Powell, Charles Smith, Jr. : Richmond, Ky., E. E. 10, Beta Theta Pi
[2]Pratt, Evelyn R. A. : Santa Monica, Engl. † 11, 1020 Waverley P
Pratt, Francis Sitwell : Ontario, Chem. 49, 108 Encina
Pratt, Marguerite Eugenia : Santa Monica, Engl. 106, 1020 Waverley P
Preisker, William Henry : Palo Alto, E. E. 44, 581 Forest P
[1]Presley, George Joseph : San Francisco, Law gr., 19 Lasuen
A. B., Stanford, 1907.

[1]Price, Chalmers G. : Santa Cruz, E. E. 7, 531 Cowper P
Price, Francis D. : Santa Barbara, Pre L. 43, 88 Encina
Price, Harry Lawrence : San Diego, Law gr., 141 Encina
A. B., Stanford, 1909.
Price, Longueville Howe : Palo Alto, Econ. 35, 602 Webster P
Price, Merton James : San Francisco, Phyl. 33, Phi Delta Theta
Prince, Ferd Jr., : Orange, Econ. 93, 173 Encina
Prout, Franklin Stanton : Palo Alto, Geol. 113, 117 Greenwood P
Pruett, Camille Madge : Claremont, Ent. 105, 5 Madroño
[1]Pruett, John Floyd : Claremont, Med. gr., 180 Encina
A. B., Stanford, 1909.
Pugh, Edmund Wright : Los Angeles, Pre L. 109, Delta Chi
Pung, Wm. Sing-Chong : Honolulu, T. H., C. E. sp. 25, Stanford Res.
Purdum, Ernest Reynolds : Colton, Law gr., 523 Cowper P
A. B., Stanford, 1910.
Pyle, Kenneth : Gilroy, E. E. 38, 103 Encina
Quinn, Ray Leslie : Reno, Nev., M. E. 13, Chi Psi
Radcliffe, Emily Hannah : Los Angeles, Lat. gr., 381 Lincoln P
A. B., Stanford, 1910.
Raines, Herbert : Campbell, E. E. 85, College Terrace
[2]Ramsdell, Harvest Richard : Kent, C. E. 117, 1360 Post, S.F.S
[2]Ramsey, Alice Emily : Stanford Univ., Hist. 12, 20 Lasuen
[1]Randall, Charles Alfred : Redding, Geol. gr., 70 Encina
A. B., Stanford, 1910.
Rankin, Fanny Belle : Petaluma, Hist. 69, Madroño
Rankin, Robert Ream: Yreka, Law gr., Acacia
B. S., University of California, 1907.
Rannells, William Morgan : Reno, Nev., Pre L. 44, 21 Encina
Rasmussen, Susie Mae : Ogden, Utah, Hist. 100, 21 Madroño
Rayburn, Donald W. : Los Angeles, Pre L. 58, 19 Lasuen
Raymer, John Wesley : Corning, Educ. gr., 847 Bryant P
B. S., University of Wisconsin, 1898; M. S., 1902.
Rea, Elizabeth Tully : Gilroy, Hist. 107, 21 Lasuen
Rea, James Harrold : Gilroy, M. E. 31, Chi Psi
Reed, Chassie Francis : San Diego, Graph. 111, 25 Madroño
Reed, Hazel Kimball : San Diego, Engl. 110, 21 Madroño
[2]Reed, Howard Saxton : Colton, Pre L. 29, Theta Delta Chi
Reene, Jane Elinor : San Jose, Engl. 103, 21 Lasuen
[1]Reese, Thomas Carvossa : Milton, Ore., Chem. 3, 359 Emerson P
Reeve, Ingalls I. : Lone Elm, Kan., Pre L. 40, 146 Encina
Reeve, Stanley Matthew : Denver, Colo., Engl. sp. 12, 549 Cowper P

Reeves, Frank Wixom : San Bernardino, C. E. 11, Sigma Nu
Reid, Herman Lincoln : Berkeley, Econ. 7, Chi Psi
Reighard, James Gamble : Pasadena, Engl. 104, 567 Melville P
Reineman, Lester Albert : Pasadena, S. Bot. 68, 133 Encina
Reis, Clement Frank : Los Angeles, Econ. 28, 24 Encina
Remington, Arthur E. : Watertown, N. Y., Geol. sp. 62, 451 Channing
Reynolds, Florence Elizabeth : Upper Lake, Hist. 39, 830 Cowper P
Reynolds, John Lynn : Compton, M. E. 78, 110 Encina
Rible, Blanch : Sacramento, Grk. gr., 62 Roble
A. B., Stanford, 1910.
Rible, Lillie May : Sacramento, Engl. gr., 62 Roble
A. B., Stanford, 1910.
[1]Rich, Willis Horton : Galesburg, Ill., Zool. gr., 249 Kipling P
A. B., Stanford, 1909.
Richards, Ralph Edward : Hilo, H. T., E. E. 14, 5 Salvatierra
Richardson, Charles Howard : Pasadena, Zool. 73, 79 Encina
Richardson, Eulalia : Tropico, Phys. gr., 17 Roble
A. B., Stanford, 1910.
Richardson, Girard Nye : Piedmont, Law gr., 105 Encina
A. B., Stanford, 1909.
Richardson, Walter H. : Santa Barbara, C. E. 81, 104 Encina
Richdale, Jay Williard : Santa Barbara, C. E. 11, 1a Alvarado
Rider, Louise : Watsonville, Graph. 42, 13 Madroño
Righter, George Lutes : Campbell, Hist. 85, 22 Encina
Rittigstein, Herman : Oakland, Pre L. 104, 84 Encina
[1]Rivers, Henry Edmund : Los Angeles, Econ. 43, Delta Tau Delta
[2]Rivers, Lilian Frances : Los Angeles, Germ. † 14, 23 Roble
[2]Robb, Charles Fremont : Los Angeles, C. E. sp., Delta K. Epsilon
[1]Roberts, John Walter : Redlands, Econ. 120, Phi Delta Theta
A. B., Stanford, 1911.
Roberts, Richard Evan : Redlands, Pre L. 8, Phi Delta Theta
Robertson, Alfred W. : Santa Barbara, Pre L. † 8, PhiGammaDelta
Robertson, Ruth Edna : Redwood City, Hist. gr., Redwood R
A. B., Stanford, 1910.
Robesky, Ethel Minerva : Bakersfield, Math. 16, 66 Roble
Robinson, Ada : Carson City, Nev., Germ. 77, 176 Bryant P
Robinson, Landon McGee : Louisville, Ky., Engl. 57, 95 Encina
Robinson, Ralph Leonard : Olinda, E. E. 100, 405 Kipling
Rockman, William Henry : Los Gatos, M. E. 8, Los Gatos L
Rockwood, Alfred Loveday : Pacific Grove, Econ. 104, Delta Tau Delta
Rodden, Mary Louise : Oakdale, Engl. 13, 23 Madroño

Rodger, Theodora Ann : Long Beach, Econ. 9, 1 Alvarado
[1]Rogers, Ernest Andrew : Campbell, Educ. gr., Hoitt School M
A. B., Gustavus Adolphus College, 1904.
Rogers, Hattie Ethelyn : San Jose, Math. gr., 117 Lenzen S.J.S
A. B., University of Pacific, 1909.
Rohrback, Daniel William : Watsonville, M. E. 8, 199 Encina
[2]Roll, Julia Irene : Santa Clara, Germ. 102, 1 Alvarado
Rooney, Harry Burnham : Auburn, Chem. 33, 132 Encina
Root, William Thomas Jr. : Pasadena, Educ. 80, 332 Everett P
Rose, Phil Sheridan : Ashland, Ore., Pre L. 8, 531 Cowper P
Ross, Ethel Mary : Santa Barbara, Engl. 90, 70 Roble
Ross, George Paul : Lakeview, Ore., Pre L. 13, 42 Encina
Ross, Perley Ason : College Terrace, Phys. gr., College Terrace
A. B., Stanford, 1908; A. M., 1910.
Roth, Almon Edward : Stanford Univ., Law gr., 105 Encina
A. B., Stanford, 1909.
[2]Rouillot, Marie E. : San Jose, Educ., 77 E.S.AntonioS.J.S.
Rounds, Merle Ballard : Wichita, Kans., Econ. 89, Phi Gamma Delta
Rounds, Ralph Madison : Wichita, Kans., Pre L. 47, Phi Gamma Delta
[1]Rowell, Alice Ruth : Berkeley, Engl. 14, Gamma Phi Beta
Rowell, Isabel : San Jose, Hist. 11, 37 Roble
Rowell, Maurice Holmes : Palo Alto, Educ. gr., 271 Stanford P
B. S., Beloit College, 1907.
Roxburgh, Eileen Margaret : Gilroy, Engl. 49, 42 Roble
Russell, Frank Marion : Pasadena, Pre L. 68, Delta Chi
[1]Ruste, Allen Martin : Charles City, Ia., C. E. 9, 635 Bryant P
Rutherford, Dorsey Jay : Pomona, C. E. 48, Encina
[1]Ryan, John Henry Jr. : San Francisco, C. E. sp., 130FrederickS.F.S
Ryerson, Regina : Sunnyvale, Hist. 73, 16 Alvarado
St. Goar, Charles Edward : San Francisco, Econ. 36, 407 Waverley P
St. John, Royal Upson : Benicia, C. E. 109, 59 Encina
[1]St. Johns, William Ivan : Whittier, Pre L. 22, Phi Kappa Psi
Salbach, Lloyd Fillmore : San Francisco, C. E. 15, Acacia
Sampson, Ruth Adele : San Diego, Engl. 87, 19 Madroño
Sanborn, Augustus Mudge : Redlands, M. E. 69, Phi Delta Theta
[1]Sanborn, Edith E. : Covina, Hist. gr., 65 Roble
A. B., University of Minnesota, 1909.
Sanborn, Gertrude Elizabeth : Yuba City, Hist. 69, 65 Roble
[2]Sanborn, Morgan Allan : Benicia, Pre L., 621 Gilman P
Sanborn, Ralph Edward : Yuba City, Chem. 110, Chi Psi
Sanborn, Thomas : Redlands, C. E. 75, Phi Delta Theta

[2]Sanchez, Enrique Aldana : Mexico City, M., Phyl. 5, 318 Emerson P
Sandstrom, Arthur Charles : Portland, Ore., C. E. sp. 10, 255 Lytton P
Sanford, Burnett : Palo Alto, Phys. 37, Phi Kappa Psi
Sayre, Marjorie Antoinette : Tacoma, Wn., Frn. 38, Alpha Omicron Pi
Schaaf, Clara Lydia : Ft. Wayne, Ind., Germ. 60, 326 Lytton P
Schaefer, Edna E. : Los Angeles, Graph. 32, 1301 Bryant P
Schaupp, Karl Ludwig : Santa Rosa, Phyl. 71, Phi Gamma Delta
Scheele, Norbert : Palo Alto, Germ. 81, 625 Hamilton P
Schilling, Henry Joseph : San Jose, C. E. 33, 536 S. 4th S. J. S
Schindler, David Monroe : Woodland, Econ. 20, Kappa Sigma
Scholefield, Crighton Welch : Hollister, M. E. 105, 34 Encina
Scholl, Albert John : Los Angeles, Chem. 40, Kappa Sigma
[2]Schuster, Richard Philip : Los Angeles, Econ., 64 Encina
Schuyler, Howard Irving : Syracuse, N. Y., Educ. 50, 132 Encina
Schwab, Erma B. : Cleveland, O., Hist. † 11, 17 Salvatierra
Schwennesen, Alvin Theodore : Clayton, Geol. gr., 10 Encina
A. B., Stanford, 1910.

[1]Scofield, William Launcelot : Palo Alto, S. Bot. 118, 153 Encina
Scott, Earl Theodore : Los Angeles, C. E. 29, 186 Encina
Scott, Ralph Donald : Long Beach, Engl. 28, Faculty Club
[1]Scougall, Stuart H. : Brisbane, Aust., C. E., 305 Alma P
Scudder, Gertrude Louise : Moss, Hist. 107, 45 Roble
Scull, Carolyn Beatrice : Santa Barbara, Engl. 111, 250 Lowe'l P
Sears, Harry Johnson : Kidder, Mo., Chem. 121, 194 Encina
Seeley, Marjory : Los Gatos, Hist. gr., 46 Roble
A. B., Stanford, 1911.

Seeley, Ruth : Los Gatos, Chem. 47, 44 Roble
[2]Seidl, Muriel Russell : San Francisco, Hist., 17 Salvatierra
Semple, George Hallion : New York, N. Y., Latin 43, 4 Lasuen
[1]Sepulveda, Harry Barnes : Alameda, Econ. 29, Chi Psi
Setz, Helmuth G. : San Antonio, Tex., Geol. 6, 245 Ramona
Sevier, Milton William : Eureka, Geol., 405 Emerson P
Seward, Richard Henry : Los Angeles, Econ. 66, Delta Upsilon
Shanklin, Nathan Jr. : San Luis Obispo, Law sp. 14, 318 Emerson
Sharp, Sidney Joseph Winter : Hanford, Pre L. 9, 9 Encina
Shattuck, Charles Henry : Alameda, M.E.82, DeltaKappaEpsilon
[1]Shaul, Gilbert Lafayette Jr. : San Diego, Pre L. 15, Phi Delta Theta
Shaw, Frances Lilian : Bakersfield, Hist. 80, 47 Roble
[1]Shaw, Jock Brown : Victoria, B. C., Econ. sp. 19, College Terrace
Shaw, Ruth Edith : Cincinnati, O., Phil. 83, 26 Madroño
Shaw, Sidney Burton : Campbell, E. E. 81, 65 Encina

Sheldon, Jeremiah William : Gilroy, Graph. 6, Encina
Sheldon, Josephine Wilmarth : Gilroy, Germ. 95, 6 Roble
Sheldon, Peryl Hazelle : Parker, S. D., Graph. 34, 16 Alvarado
Shellenberger, Olive W. : SaltLakeCity,U., Engl. 83, 16 Alvarado
Shelton, James Errett : San Jose, Law gr., Delta Chi
A. B., Stanford, 1910.
[2]Shelton, William Cortez : San Jose, Law gr., Stanford Inn
A. B., Stanford, 1908.
[1]Shepardson, Anita Arline : Los Angeles, Hist. gr., 31 Roble
A. B., Stanford, 1910.
[1]Shepp, Harold Leighton : Los Angeles, Pre L. 8, Theta Delta Chi
Sherman, Harold Meredith : Redlands, Pre L. 72, Delta Chi
[1]Shishmanian, John Amar : Palo Alto, Law gr., 660 Waverley P
A. B., University of Kentucky, 1903.
Shoemaker, Benjamin Dey : Pasadena, Chem. gr., 78 Encina
A. B., Stanford, 1910.
Shoemaker, Clyde Clarence : Orange, Law gr., 77 Encina
A. B., Stanford, 1910.
[2]Show, Ruth Katherine : Palo Alto, Bot. 11, 353 Melville P
Shumway, Earl Jeremiah: Wakefield, Neb., Geol. † 11, 661 Gilman P
Shumway, Howard Paine: Wakefield, Neb., Psych. 43, 661 Gilman P
Sieber, Bertha Wilhelmina : Woodland, Lat. 73, Pi Beta Phi
Siefert, Alfred L. Camille : Pasadena, Phyl.-Med. 115, 32 Encina
[2]Sim, Douglas Hamilton : Cupertino, Pre L., SigmaAlphaEpsilon
Simon, Cecil Stocker : Los Gatos, M. E. 47, Los Gatos L
Simonds, Sarah Louise : Pasadena, Econ. 50, Delta Gamma
Simons, Ada Beatrice : Los Angeles, Graph. 74, 29 Roble
Simons, Walter Wallenau : Butte, Mont., E. E. 10, 603 Waverley P
Simpson, William Edward : Bakersfield, Law sp. 42, Delta Chi
[1]Sims, Firman Clay : Elnora, Ind., Pre L. 10, 359 Emerson P
Sinclair, Ewart Gladstone: Kalispell, Mont., Geol. 92, 318 Emerson P
Skinner, John Kennerta : Los Angeles, Geol. † 9, Sigma Nu
Skolfield, Esther May : Portland, Ore., Phyl. 87, 52 Roble
[1]Slack, Celete B. : Indianapolis, Ind., Engl. †, 19 Lasuen
Slack, Walter : Juniata, Neb., Law gr., 125 Encina
A. B., Stanford, 1909.
[1]Slade, Russell Clark : Menlo Park, Hist. 59, Beta Theta Pi
[1]Sloan, John Schutser : Sunnyvale, Econ. 39, Sunnyvale S
Small, Horatio L. : Palo Alto, Geol. 100, 334 Cowper P
Smallpage, Lafayette John: Stanford Univ., Law gr., 176 Encina
A. B., Stanford, 1909.

Smart, Ornan Bridges : Los Angeles, Geol. 70, S. Alpha Epsilon
Smart, Ruth Adair : St. Paul, Minn., Engl. 99, 1 Alvarado
Smiley, Frank Jason : Berkeley, Hist. 17, 446 Hamilton P
Smith, Chauncey : Pasadena, M. E. 55, Theta Delta Chi
Smith, Cordelia Madison : Venice, Graph. † 11, GammaPhiBeta
Smith, Curtis Easdon : Boise, Ida., C. E. † 46, 405 Kipling P
Smith, DeLancey Corwine : Berkeley, Law sp. 9, 126 Encina
Smith, Edgar Clarence : Azusa, Pre L. 54, 42 Encina
[1]Smith, Edith Howard : San Francisco, Engl. 31, Delta Gamma
Smith, Elmer William : Ferndale, Phyl.-Med. 124, 712BryantP
Smith, Felita Mary : Fresno, Germ. 89, 46 Roble
[1]Smith, Harry Ellsworth : Saratoga, Pre L. 120, 166 Encina
A. B., Stanford, 1911.

Smith, Harry James : Ferndale, Phyl.-Med. 99, 712 Bryant P
Smith, Mildred : Ferndale, Germ. 15, 611 Bryant P
[2]Smith, Olive Mabel : Manette, Wash., Hist. 10, Alpha Phi
Smith, Stanley Bassett : Campbell, Hist. 91, 31 Encina
Smith, Talmage Laughner : Irwin, Pa., Pre L. 9, 27 Salvatierra
Smith, Victor Morris Jr.: Mountain View, C. E. 12, 825 Univ. P
Smith, Warren Locke : Ferndale, Ent. 63, 712 Bryant P
Smith, Wayne Ellwood : Santa Rosa, Pre L. 11, College Terrace
Smith, William Taylor : San Diego, E. E. 53, Phi Kappa Psi
Smitherum, Harrison : San Jose, C. E. 104, 19 Encina
[1]Smothers, Arthur E. : Rossville, Ill., C. E. gr., 181 Encina
A. B., Northwestern University, 1906.

Smyth, Glen Miller : Salt Lake City, U., Chem. 29, Phi Gamma Delta
[2]Snell, Joel Andrew : Palo Alto, Educ. gr., 431 Lytton P
A. B., Stanford, 1901.

Snell, Lester William : Raton, N. M., Geol. 13, 405 Emerson P
Snell, Thomas William : West Saticoy, E. E. 107, 44 Encina
Snyder, Gaylord Kenyon : Cleveland, O., E. E. 42, Beta Theta Pi
[1]Snyder, Lucille H. : San Bernardino, Engl. 14, 406 Ramona P
Snyder, Olive Mae : McPherson, Kans., Engl. † 12, 1130 Waverley P
[1]Sobey, Hazel : San Francisco, Hist. 51, Delta Gamma
[1]Sobey, Wilfred John : San Francisco, Phyl. 8, Phi Delta Theta
Somerville, Carol : Los Angeles, Engl. 105, 11 Salvatierra
Sontheimer, Urban Alexander : San Jose, Pre L. 74, 97 Auzerais S.J.S
Soper, Ralph Hamilton : Palo Alto, Geol. 81, 305 Lytton P
Soule, Ruth : Alameda, Hist. 14, Kappa Alpha Theta
Soult, Harold Houser : Osborne, Kan., C. E. gr., 819 Alma P
A. B., Washburn College, 1907.

Sours, Lulu Adnimra : Wichita, Kans., Educ. gr., 14 Salvatierra
A. B., Stanford, 1910.

Spaan, Wilhelm C. : Mountain View, Educ. gr., Mt. View M
A. B., Iowa College, 1896.

Specht, Ida Louise : Rockwell, Iowa, Math. 112, 67 Roble
Spellman, Thomas Joseph : Colma, C. E. 39, 22 Encina
Spence, Homer Roberts : Alameda, Pre L. 40, Chi Psi
Spencer, Daisy : Palo Alto, Hist. 24, Pi Beta Phi
Spencer, Esther Jean : Palo Alto, Lat. gr., 233 Addison P
A. B., Stanford, 1907; A. M., 1909.

[1]Sperry, William Hatfield : San Francisco, Law sp., 411 Yale
[1]Spooner, Georgina B. : San Antonio, Tex., Bact. gr., 381 Lincoln P
A. B., Vassar College, 1907; A. M., 1908.

Stabern, Suzanne : Helena, Mont., Engl. 50, 14 Salvatierra
Stadler, Marie Helena : Helena, Mont., Phyl. 32, 20 Madroño
Stafford, Clarence John : San Francisco, Pre L. 13, Zeta Psi
[1]Stahl, John A. : San Francisco, Econ. 120, 16 Salvatierra
A. B., Stanford, 1911.

Stahl, Lionel Adolf : San Francisco, Hist. 63, 82 Encina
Stammer, Walter Henry : San Jose, Pre L. 10, 146 Encina
Standish, Allan Morgan : Piedmont, Econ. 12, Beta Theta Pi
[1]Stanton, LeRoy Hamilton : Los Angeles, Econ. 45, S. Alpha Epsilon
Stark, Theodore K. : Grundy Center, Ia., Econ. 102, 33 Encina
Stauf, Ida : Palo Alto, Germ. gr., 1029 Ramona P
A. B., Stanford, 1910.

Stearns, Edna Adele : Oakdale, Hist. 13, 23 Madroño
Stearns, Glenn Warwick : Palo Alto, Span. 61, 4 Encina
Steck, Louis George : Colton, S. Bot. 61, 23 Encina
Steel, Emilie Gladstone : Palo Alto, Math. 14, 856 Middlefield P
Stein, Allan Thurman : Boise, Idaho, Pre L. † 11, 359 Emerson P
Steinbeck, Grace Clare : Stockton, Zool. 111, Delta Delta Delta
Stendel, Dorothy Esther : Santa Maria, Germ. 15, 52 Roble
Stephenson, Burroughs Agin : Los Altos, C. E. 62, Los Altos L
Stevens, Verne Genoa : Palo Alto, S. Bot. 43, 926 Cowper P
Stever, Robert Frederick : Redwood City, Law sp. 71, Phi Kappa Psi
[2]Stevick, Anna Laura : Palo Alto, Sys. Bot. † 12, 509 Hale P
Stewart, Edwin John : Los Angeles, Geol. 61, 29 Encina
Stewart, James : Chico, Phyl. 27, 4 Encina
Stewart, Paul Eve : Pasadena, Educ. 88, 12 Alvarado
Stidston, Russell Osborne : Los Gatos, Engl. gr., 757 Homer P
A. B., Stanford, 1911.

[1]Stillman, Dorothy Maxson : Stanford Univ.	Engl. 72,	2 Alvarado
Stillson, Grace Elizabeth : Palo Alto,	Hist. 14,	451 Ruthven P
Stoll, Leland Clyde : Sacramento,	Pre L. 45,	18 Alvarado
Stolle, Francis : Palo Alto,	Med. gr.,	683 Hamilton P
A. B., Stanford, 1910.		
[1]Stone, Alta Dorthula : Tropico,	Phys. gr.,	67 Roble
A. B., Stanford, 1910.		
Stone, Herbert : Martinez,	Geol. sp. 45,	1229 Webster P
[2]Stone, Laura Clair : San Jose,	Engl.,	16 Roble
Stone, Lester Franklin : San Francisco,	C. E. 4,	Chi Psi
Strickler, Lynda Louise : Denver, Colo.,	Graph. 71,	Delta Delta Delta
[1]Strong, Malcolm W. : Plainfield, N. J.,	Engl. 47,	Beta Theta Pi
Stuart, Donald Bostwick : Portland, Ore.,	Pre L. † 35,	Sigma Nu
Stuart, Mary Virginia : Redlands,	Math. 104,	6 Roble
Sudden, Ruth Catherine : Ventura,	Hist. 80,	21 Lasuen
Suehiro, Matsunosuke : Yamaguchi, Japan,	E. E. 31,	1400 Waverley
Sugars, Nell Muriel : Los Angeles,	Educ. 80,	224 Emerson P
Sugino, Shigeichi : San Francisco,	C. E. sp. 28,	Japanese Club
Suits, Elihu Edward : Santa Monica,	M. E. 29,	81 Encina
[1]Summerfield, Arthur Clifford : San Fran.,	E. E. 34,	4 Lasuen
Summerfield, Lester Douglas : Reno, Nev.,	Pre L. 89,	85 Encina
[1]Sundell, Alfred Luis : Alameda,	Geol. 31,	DeltaKappaEpsilon
Sutter, Milton Leroy : Hamburg, N. Y.,	Econ. 71,	193 Encina
Suzuki, Tomitaro : Yamanashiken, Japan,	Phil. 48,	1327 Byron
Swafford, Henry Watson : San Jose,	Econ. 75,	S. Alpha Epsilon
Swan, Guy Carleton : Lawrence, Mass.,	Chem. sp. 45,	2 Lasuen
Swanson, Charles Raymond : Selma,	C. E. 10,	136 Encina
[1]Sweeney, Thomas Cruse : Helena, Mont.,	E. E. sp.,	Phi Kappa Psi
Sweet, Lloyd Dudley : Chinook, Mont.,	Econ. 38,	184 Encina
Swem, Harry Archie : Salt Lake City, U.,	Geol. 39,	Sigma Chi
Swift, Emeline Adelaide : Montecito,	Econ. 99,	4 Roble
Swift, Faith A. : Santa Cruz,	Zool. 76,	323 Hamilton P
Swigart, Clyde Arthur : San Francisco,	C. E. 109,	76 Encina
Taber, Arthur Pratt : Red Wing, Minn.,	E. E. 40,	92 Encina
Tabor, Clarence Edward : Eureka,	C. E. 93,	74 Encina
Tag, Tessie : Los Angeles,	Germ. 54,	706 Cowper P
[1]Talboy, Archibald Carlisle : Sioux City, Ia.,	Pre L. 107,	311 Middlefield P
[1]Talboy, Della Irene : Sioux City, Ia.,	Lat. 75,	311 Middlefield P
[1]Talboy, William Eugene : Sioux City, Ia.,	Hist. 111,	311 Middlefield P
Tallant, Charles Harold : Santa Barbara,	E. E. 108,	135 Encina
[1]Taverner, Frances Kate : Ashland, Ore.,	Engl. 24,	22 Roble

Taylor, Charles Chappell : Selma, C. E. 70, 83 Encina
[1]Taylor, Harriet E. : Waitsburg, Wn., Graph. 9, 17 Salvatierra
Taylor, Leroy Edward : Menlo Park, Econ. 59, Menlo Park M
Taylor, Louis John : Los Angeles, Geol. 113, 66 Encina
Taylor, Nelson : Los Angeles, C. E. 116, Phi Delta Theta
[2]Templeton, Eugene Crittenden : Palo Alto, Geol. gr., 375 Everett P
A. B., Stanford, 1910.
[1]Tennant, Harold M. : Rockwell City, Ia., Educ. 70, Faculty Club Hs.
Terry, Zebulon Alexander : Los Angeles, Econ. 13, Delta Tau Delta
[1]Terry, Marcus Claude Jr. : Brighton, Ia., Bact. sp., 536 Middlefield P
Theile, William C. : Emmettburg, Ia., Law gr., Delta Upsilon
A. B., Stanford, 1910.
Thoburn, James Harold : Palo Alto, Phyl. 31, 329 Lincoln P
[2]Thomas, Dan Horace : Santa Ana, Geol. 39, Chi Psi
Thomas, Earl Charles : Portland, Ore., C. E. 14, 255 Lytton P
Thomas, Iva : Pasadena, Lat. gr., 3 Roble
A. B., Stanford, 1909.
Thomas, James Carl : Las Vegas, Nev., Econ. 67, Delta Tau Delta
Thomas, William Henry : Moscow, Idaho, C. E. 110, Stanford Inn
[1]Thomison, Joel D. : Fayetteville, Tenn., Pre L. 124, 225 Channing P
A. B., Stanford, 1911.
Thompson, Edward B. : Pittsburg, Pa., Engl. 26, 54 Encina
Thompson, Elizabeth : Palo Alto, Engl. gr., 635 Waverley P
A. B., Stanford, 1910.
Thompson, Georgia Emily : San Diego, Med. gr., 1 Alvarado
A. B., Stanford, 1911.
Thompson, James Ernest : San Jose, Law sp. 104, 58 Encina
Thompson, Mildred H. : Buffalo, N. Y., Educ. 24, 1 Alvarado
[2]Thompson, Muriel E. : Cimarron, Kans., Hist. 43, 851 Univ. P
Thompson, Roy Burton : San Jose, Educ. 10, 5 S. Lincoln S. J. S
Thompson, Thomas West : Palo Alto, Geol. 72, 909 Alma P
Thompson, William F. : Everett, Wash., Zool. 110, 2 Encina
Thompson, Willard Simeon : Oakland, Pre L. 7, Kappa Sigma
Thoreson, Laurence L. : Los Gatos, Pre L. 7, R.F.D.17, Mt. View
Thornton, John Ray : Eden Vale, C. E. 81, 1112 Palo Alto P
Thresher, Mary Louise : Gridley, Germ. 15, 64 Roble
Thurmond, Hugh Gwyn : Carpinteria, C. E. 72, 107 Encina
[1]Tiedemann, Tudor Herman A. : Alameda, Hist. 57, Phi Kappa Psi
Tilton, Lloyd Irvine : Bakersfield, Pre L. 9, Delta Chi
Tincher, Eugene Earl : Long Beach, Pre L. 59, Bryant&Hamilton
[1]Tisdale, Marjorie Minnie : Redlands, Econ. 17, Delta Gamma

Tittle, Ward Clark : San Francisco, Law sp. 55, 120 Encina
[2]Titus, Lela Juanita : San Diego, Graph. †, 27 Madroño
Todd, Monette Osie : Riverside, Hist. gr., 39 Roble
A. B., Stanford, 1910.
Tognazzini, Irene Amanda : Cayucos, Phyl. 42, 19 Roble
Topham, James Scott : Washington, D. C., C. E. sp. 70, Acacia
Toy, Susan Maud : Santa Maria, Educ. 73, 1 Alvarado
Trace, Gertrude May : San Jose, Educ. 44, 730 Univ. S. J. S
Tracy, Howard Sloane : Los Angeles, Pre L. 103, 172 Encina
Trask, George Harlan : Los Angeles, C. E. 36, College Terrace
Treacy, Frederic William : Helena, Mont., Econ. 43, Kappa Alpha
Trost, Helen Gertrude : San Jose, Educ. 72, 396 S. 6th S. J. S
Troy, Matthew Jr. : Portland, Ore., C. E. 9, Sigma Chi
Tsuchiya, Shiusei : Pasadena, E. E. 73, Japanese Club
Tsuzaki, Mitsuji : Kumamoto Ken, Japan, E. E. 72, 1015 Forest Court
Tucker, Warren Jr. : Redlands, Pre L. 58, Delta Chi
Tulloch, Leslie Sutherland : Kohala, H. T., Engl. 12, 47 Roble
Tulloch, Martha : Kohala, H. T., Hist. 16, 64 Roble
[1]Tully, Genevieve Morton : San Jose, Engl. 123, 22 Roble
A. B., Stanford, 1911.
Tully, Wilford Hamilton : San Jose, Pre L. 12, 358 N. 7th S. J. S
Tupper, Charles Ralph : San Jose, C. E. 92, 211 S. 8th S. J. S
Turner, Thomas Norton : San Francisco, Geol.75, Sigma Alpha Epsilon
Turpin, Charles Sawyer : Mill Valley, Pre L. 37, Delta Tau Delta
Tuttle, Charlotte Ella : Nampa, Idaho, Germ. 77, Gamma Phi Beta
[1]Tuttle, Ruth Claire : Watsonville, Germ. 38, Madroño
Twombly, Margaret Marie : Palo Alto, Phyl. 79, 850 Ramona P
[1]Utter, Ben Watkins : Sacramento, Pre L. 127, Delta Chi
A. B., Stanford, 1911.
[2]Vail, Alida : San Francisco, Hist. gr., Alpha Phi
A. B., Stanford, 1909.
Vail, Helen : Palo Alto, Econ. 7, 333 Channing P
[2]Valentine, Jean Mae : Los Angeles, Engl. 11, K. Kappa Gamma
[1]Vance, George Edwin : Huron, S. D., Pre L. 6, 5 Lasuen
Vanderburg, Chester Marian : Madera, Phyl. 10, 512 Lytton P
[2]Van Dyke, Benjamin Franklin : Ukiah, Law sp., 45, 158 Encina
Van Etten, Ilza Katrine : Palo Alto, Hist. 14, 465 Hawthorne P
Van Nostrand, John J. Jr.: Chicago, Ill., Lat. gr., 9 Salvatierra
A. B., University of Chicago, 1905.
Van Sicklen, Wm. J.: Castleton, Ont., Can., Chem. 95, 748 G. G., S. F. S
Van Slyck, Kenneth : Trinidad, Colo., Econ. 106, 49 Encina

Van Zwalenburg, Bertha F. : Riverside, Germ. 72, Delta Delta Delta
[2]Vaughn, Romney Leigh : San Francisco, C. E. 42, 359 Emerson
Vickers, Joseph W. : Los Angeles, Pre L. 71, 43 Encina
Vickrey, William Waitman : Los Angeles, Econ. 36, Kappa Sigma
Virmani, Devi D. : Bahawalpore, India, Chem. sp. 26, 245 Ramona
Virtue, Ethel Buell : Webster City, Ia., Lat. gr., 16 Roble
A. B., University of Wisconsin, 1907.

[1]Visel, Jack Angele : Santa Ana, Law sp. 66, Kappa Alpha
[1]Visel, Stanley Angele : Santa Ana, Pre L. 7, Kappa Alpha
Volkmor, Mary Hilda : Whittier, Math. 30, 15 Roble
Vrang, Christion Madsen : Berkeley, Geol. sp. 20, SigmaAlphaE.
Wada, Totara : San Francisco, Econ. 64, 1098 Emerson P
Wade, Benjamin Franklin : Long Beach, C. E. 114, Phi Delta Theta
Wade, Gustav : Naples, E. E. sp. 82, 96 Encina
Wade, John Oscar : Chicago, Ill., C. E. † 9, 405 Emerson P
Waelty, Waldo Ralph : Santa Clara, Chem. 48, Santa Clara S
Wagner, Elizabeth Dorothea : San Jose, Educ. 12, 355 Reed S. J. S
Wagner, Hubert Hudson : San Jose, C. E. 13, 355 Reed S. J. S
Wagner, Vesta Marion : Ventura, Engl. 43, KappaAlphaTheta
Wait, Robert Cyrus : Reynolds, Ill., Pre L. 70, Sigma Chi
Wakeman, Earl Seeley : Palo Alto, Law gr., 521 Cowper P
A. B., Stanford, 1911.

Waldraff, Paul Herman : San Mateo, Chem. gr., 118 Encina
A. B., Stanford, 1910.

Walker, Alice Edna : Los Angeles, Econ. gr., 24 Roble
A. B., Stanford, 1910.

Walker, Charles Glenn : Ceres, C. E. 104, 33 Encina
Walker, Harold Nelson : Spokane, Wn., E. E. 14, 334 Waverley P
[1]Walker, Leland Harrison : Los Gatos, Pre L. 84, Los Gatos L
Wallace, Bruce : Visalia, Geol. 70, Chi Psi
Wallace, Roger Wayne : Palo Alto, Law gr., 1001 Ramona P
A. B., Butler College, 1909.

Wallach, Guss Valentine : Boonville, C. E. 40, 90 Encina
Walton, Lois Mae : Santa Barbara, Engl. 35, Alpha Omicron Pi
Ward, Butler Etter : San Diego, Pre L. 9, Kappa Alpha
[2]Ward, Marion : Los Angeles, Hist. † 11, Kappa K. Gamma
Ward, Martin Luther Jr. : San Diego, Pre L. 66, 122 Encina
Ward, Matthew : Antioch, Law sp. 6, 704 Bryant P
Ward, Newman : Portland, Ore., Geol. 13, College Terrace
Ward, Paul Philip : San Diego, Pre L. 62, 122 Encina
[2]Ware, Cassandra Maxon : Paducah, Ky., Frn. 43, 559 Cowper P

Waring, Clarence Almon : Mayfield, Geol. 93, College Terrace
Warlow, Chester Harvey : Fresno, Pre L. 102, Sigma Chi
Warrior, Mabel : Mayfield, Graph. gr., Evergreen Prk.P
A. B., Stanford, 1910.

Warthorst, Bertha Lydia : Bakersfield, Phys. 106, 31 Roble
Wason, Thomas Frederick : Santa Paula, C. E. 10, 704 Bryant
Waters, Pearl Elizabeth : Santa Clara, Math. 82, Santa Clara S
Watkins, Fred Bradshaw : Los Angeles, Chem. 13, 2 Alvarado
Watkins, Vida Mildred : Kingman, Ariz., Bot. 78, 45 Roble
Waud, Joyce Emily : Ventura, Bot. 14, K. Kappa Gamma
Weaver, Eva R. : Colorado Springs, Colo., Germ. 45, 537 Hamilton P
Weaver, Kent Mercer : Portland, Ore., Hist. 11, Phi Kappa Psi
Weaver, Wm. I. : Colorado Springs, Colo., Chem. 38, 537 Hamilton P
'Weber, John Raymond : Pomona, Pre L. 13, 177 Encina
Webster, Frederick C. : Galesburg, Ill., Econ. † 6, 804 Bryant P
Weeks, James Paschal : Red Bluff, C. E. 79, 536 Ramona P
'Weldt, Amy Marie : Wilmington, Zool. 41, 34 Roble
Weller, Lawrence L. : Waitsburg, Wash., Econ. 6, Chi Psi
Wellington, Herbert G. : Ft. Worth, Tex., Engl. 46, 417 Emerson
Wells, Albert Huntington : Auburn, N. Y., Chem. 111, 160 Encina
Wells, Edwin Adams Jr. : San Diego, Pre L. 13, Phi Delta Theta
Wells, James Bertrand : Palo Alto, C. E. 106, 365 Guinda P
Wendling, Florence Martha : San Fran., Hist.69, KappaKappaGamma
Wenk, Morris : Stockton, E. E. 101, 25 Salvatierra
West, Howard Frank : Los Angeles, Phyl. 69, 1020 Waverley P
Westwick, Alice Eliza : Santa Barbara, Germ. 108, 2 Roble
Westwick, Robert C. : Santa Barbara, C. E. 104, 155 Encina
Weymouth, Frank W. : Stanford Univ., Zool. gr., 32 Encina
A. B., Stanford, 1909; A. M., 1911.

Weyse, Alice Caroline : Los Angeles, Hist. 41, Alpha Omicron Pi
Wheaton, Carl Crumbie : Palo Alto, Pre L. 102, 127 Cowper P
Whelan, Eva Blanche : Los Angeles, Hist. 64, 11 Salvatierra
Whitaker, Ralph Warren : Lebanon, Ind., C. E. 46, Delta Upsilon
White, Helen : Alameda, Frn.105,KappaKappaGamma
'White, Henry Austin : Honolulu, T. H., C. E. 70, Chi Psi
White, Herbert Eustice : Sacramento, Pre L. 107, 116 Encina
White, Phebe Anna : Kingfisher, Okla., Latin gr., 1 Alvarado
A. B., Kingfisher College, 1904.

White, Printess : St. Charles, Ia., Chem. sp. 9, 113 Circle P
Whiting, Dwight : Los Angeles, Chem. 13, 40 Encina
Whitmyer, Albert : Ogden, Utah, Geol. †, 704 Bryant

[1]Whitney, Charles Willard : Eureka, E. E., 136 Encina
[1]Whitney, Clyde Carl : Santa Ana, Law sp. 45, Kappa Alpha
Whittemore, Elsie Louisie : Alhambra, Germ. 79, 628 Gilman P
Whittemore, J. R. : Los Angeles, Law sp. 60, Phi Kappa Psi
Wickman, Frederick W. : Honolulu, T. H., Hist. 11, Phi Kappa Psi
*[2]Wiedman, Edwin Marston : Reno, Nev., Geol. sp. 23, Acacia
Wiedman, Raymond Henry : Pony, Mont., Pre L. sp. 30, Acacia
Wiggins, John H. : Neosho Falls, Kans., C. E. 118, 70 Encina
Wilcox, Robert W. : Delta, Colo., Phyl. 41, 128 Encina
Wilde, F. Luqueer : Dobbs Ferry, N. Y., Geol. 109, Sigma Chi
Wiles, Coral Agnes : Chico, Engl. 53, 13 Roble
Wiley, Korah Belle : Palo Alto, Latin 98, 543 Byron P
Wilkins, Edith Amelia : Bolinas, Bot. 105, 54 Roble
[2]Will, Elsa : Rochester, N. Y., Phyl. † 9, 357 Kingsley P
Willard, Frankie : Calexico, Ent. 112, 39 Roble
Willfong, George W. : Hilo, T. H., Econ. sp. 14, Phi Kappa Psi
Williams, Edle Carolyn : Gustine, Graph. 13, 323 Hamilton P
Williams, Florence : Los Angeles, Bot. gr., 41 Roble
A. B., Stanford, 1911.
Williams, Harry Kingsley : Los Angeles, C. E. 35, 142 Encina
Williams, Laurence Davis : Yuba City, C. E. 75, 170 Encina
[2]Williams, Sydney Lloyd : Redwood City, Pre L. 26, Redwood City R
Wilson, Clarence John Ramsey : Anaheim, C. E. 111, 181 Encina
Wilson, Florence Mollie : Los Angeles, Hist. 58, Delta Gamma
Wilson, George Osborne : Saratoga, E. E. 12, Saratoga
Wilson, James Franklin : Little Rock, Ark., C. E. 74, 55 Encina
Wilson, Marguerite E. : Los Angeles, Hist. 104, Delta Delta Delta
[2]Wilson, Walter Victor : Palo Alto, Pre L., Phi Kappa Psi
Wilson, Weston Stephens : Los Angeles, Econ. 47, Zeta Psi
[2]Winchell, Elizabeth A. : Loveland, Colo., Engl. gr., 515 Waverley P
A. B., Tabor College, 1908.
[1]Wingard, Arthur Jacob : Redlands, Med. gr., 19 Lasuen
A. B., Pomona College, 1910.
Winters, Verne William : Spokane, Wn., M. E. 81, 959 Waverley P
Wiseman, Alta Echo : Famosa, Phys. 74, 27 Roble
Wishard, Alice Mary : Sunnyvale, Graph. 70, 251 Emerson P
Wolcott, Herbert Betts : Carthage, Mo., Hist. 13, 603 Waverley P
Wolff, Carrie Boole : San Fernando, Engl. 26, 639 Gilman P
Wolff, Franklin Fowler : San Fernando, Math. 103, 639 Gilman P
[1]Wood, Anna Margaret : Escondido, Hist. 10, 564 Univ. P

*Died March 27, 1911.

[1]Wood, Catharine Mary : Escondido, Frn. 1, 564 Univ. P
Wood, Dorothy Augusta : Palo Alto, Zool. 14, 1757 Waverley P
[1]Wood, Edward Huffner : Escondido, Pre L. † 2, San Mateo
[2]Wood, Frederick Bertram : Palo Alto, Law gr., 1757 Waverley P
A. B., Stanford, 1910.
Wood, Granville Numan : Blue Lake, Law sp. 5, Stanford Inn
Wood, Harry Reynolds : Los Angeles, Engl. 6, Phi Kappa Psi
Wood, Mamie Etta : Whittier, Engl. 107, 16 Alvarado
Wood, Willard Selwyn : Pasadena, Engl. sp. 9, Acacia
Woodcock, Elbert Cecil : Portland, Ore., E. E. 106, 134 Encina
Woodhead, Florence Miriam : Los Angeles, Phil. 102, 6 Alvarado
Woodhead, Lora Mae : Los Angeles, Zool. gr., 6 Alvarado
A. B., Stanford, 1911.
Woodville, Robert : Bay City, Pre L. 102, S. Alpha Epsilon
[1]Woodward, Robert Clarence : Muncy, Pa., Chem. † 19, Acacia
Woolley, James Earl : Santa Rosa, Pre L. 56, 13 Encina
Wooster, Roy Neill : Spokane, Wn., E. E. 135, 46 Encina
Worden, Waldo Stephen : San Jose, E. E. 20, 41 S. River S. J. S
Workman, Gertrude Dardier : Los Angeles, Engl. 59, Delta Gamma
Worswick, George Draper : San Jose, Econ.27, SigmaAlphaEpsilon
Worthington, Robert Strong : Alameda, Geol. 34, 183 Encina
Worthy, Elmer Thomas : Santa Ana, Pre L. 10, 14 Salvatierra
Wright, George Ireland : Pasadena, E.E.sp. 42, Phi GammaDelta
Wright, Lester Augustus : San Diego, C. E. 44, Phi Kappa Psi
Wyman, Eleanor McKee : San Luis Obispo, Lat. 11, 70 Roble
[1]Wyman, William McKee : San Luis Obispo, Law sp. 56, 331 Hamilton P
Yeary, Malcolm Leonidas : Los Angeles, Lat. † 13, 1037 Ramona P
Yoch, Agnes Cecilia : Santa Ana, Span. 61, 11 Salvatierra
Yokozeki, Kirosaburo : Kagawa, Japan, Econ. 43, Japanese Club
Young, Frank Herbert : Fort Jones, Econ. 49, Theta Delta Chi
Young, Hayes Wilson : Mojave, Geol. 115, 109 Encina
Young, Sarah Irene : Salt Lake City, U., Engl. 90, 430 Ramona P
Young, Stanley Colin : San Jose, Pre L. 66, 139 Encina
[2]Young, Walter Frederick : Rock Island, Ill., Pre L. sp., 707 Bryant P
Youse, Lucy : Palo Alto, Bot. gr., 627 Waverley P
A. B., University of Indiana, 1897.
[2]Zimmerman, Ila Mae : San Francisco, Graph., 16 Alvarado
Zimmerman, Ruth : Fremont, Ohio, Hist. 19, 49 Roble
Zinn, Cleo Jack : Los Angeles, Geol. † 7, 417 Emerson P

SUMMER SESSION, 1910

Field Geology

Arrell, Dell Bernie
Boundey, Elwin James
Boyd, Harold Edward
Burcham, William David
Crook, Welton Joseph
Halliday, Thomas Woodruff
Hannibal, Harold Briggs
Hook, Joseph Stanley
Jordan, Knight Starr
Leib, Earl Russell Warren
Louis, Gilbert Ernest
Menke, John Henry, Jr.
Merritt, Floyd Calhoun
Nash, Howard Frank
Nolan, Edward Dana
Packard, Henry Jessup
Peckham, Arthur Bixio
Prout, Franklin Stanton
Robbins, James Clayton
Small, Horatio L.
Taylor, Louis John
Templeton, Eugene Crittenden
Waring, Clarence Almon
Wilde, Frank Luqueer
Young, Hayes Wilson

Marine Biological Laboratory.

1. *Occupying Investigators' Rooms.*

Heath, Harold, Professor of Zoology,
Leland Stanford Junior University
Price, George C., Professor of Zoology,
Leland Stanford Junior University
Thompson, William F., Assistant in Entomology and Bionomics,
Leland Stanford Junior University

2. *Taking Regular Courses.*

Baugh, Lucile
Binkley, Merle
Bland, Lotta L.
Branner, George Casper
Greene, Carl Hartley
Gunnell, Mary Elizabeth
Harris, Marjorie
Hayes, Casey Hewitt
Hayden, Edith
Hiller, Hazel Heloise
Hook, Bertha Louise
Jenkins, Alice Mabel
Jenkins, Olaf Pitt
Johnston, Hazel May
Keyston, Garston D.
Lenox, Lionel Tracy
Mann, William M.
Mason, Ruth
Morrison, George David
Pomeroy, Frank Kenneth
Rea, Elizabeth Tully
Richardson, Charles Howard, Jr.
Rockwood, Alfred Loveday
Sanborn, Ralph Edward
Scofield, William Launcelot
Seeley Majory
Sherfy, Samuel Hash
Stahl, John A.
Steck, Louis George
White, Henry Austin
Williams, Florence

SUMMARIES

Officers

Trustees		15
Faculty		
Professors	55	
Associate Professors	21	
Assistant Professors	36	
Instructors	34	
Assistants	70	
Lecturers	4	220
Other Officers		78

Students

Graduates		
Accepted Candidates for Degree of A. M.	80	
Accepted Candidates for Degree of Engineer	5	
Accepted Candidates for Degree of J. D.	32	
Accepted Candidates for Degree of Ph. D.	19	
Other Graduate Students	71	207
Undergraduates		1442
Special Students		109
Total		1758
Summer Registration	59	
Less names already counted	47	12
Total (including Summer Registration)		1770

By Major Subjects	Graduate	Under Graduate	Special	Total
Greek	1	3	—	4
Latin	13	29	—	42
Germanic Languages	11	66	—	77
Romanic Languages	4	31	—	35
English	19	129	5	153
Psychology	1	4	—	5
Philosophy	—	6	—	6
Education	20	36	1	57
History	23	159	3	185
Economics and Social Science	8	130	11	149
Law	45	*48	31	124
Pre Legal Course	—	182	6	188
Graphic Art	4	46	1	51
Mathematics	1	20	1	22
Applied Mathematics	—	1	—	1
Physics	7	6	—	13
Chemistry	6	57	3	66
Botany	4	20	1	25
Physiology and Histology	2	57	2	61
Anatomy	2	—	—	2
Bacteriology	1	—	1	2
Zoology	7	11	1	19
Entomology	4	11	1	16
Geology and Mining	6	90	6	102
Civil Engineering	4	162	16	182
Mechanical Engineering	2	42	7	51
Electrical Engineering	1	96	12	109
Medicine	11	†5	†1	17

* Seniors in Pre Legal Course counted as Law Majors.
† Also registered as Physiology Majors.

By Residence.

California	1371	Texas	3
Washington	42	Wyoming	3
Oregon	31	Kentucky	2
Iowa	25	Maine	2
Illinois	26	Michigan	2
New York	25	North Dakota	2
Colorado	20	Tennessee	2
Utah	17	Vermont	2
Montana	16	Alabama	1
Hawaii	14	Alaska	1
Kansas	12	Arkansas	1
Ohio	12	Connecticut	1
Indiana	11	Maryland	1
Pennsylvania	10	Mississippi	1
Arizona	9	Rhode Island	1
Missouri	8	Japan	9
Idaho	7	Australia	5
Nevada	7	Canada	4
Massachusetts	5	India	3
Minnesota	5	Mexico	3
Nebraska	4	China	2
New Mexico	4	Holland	2
Wisconsin	4	Austro-Hungary	1
District of Columbia	3	Chile	1
New Jersey	3	England	1
Oklahoma	3	Ireland	1
South Dakota	3	Switzerland	1

ALUMNI ASSOCIATION

[Organized June 15, 1892]

CONSTITUTION

(As amended May, 1908)

In order to promote the interests of the University, to secure unity among its graduates, and to foster an attachment to our *Alma Mater*, we do hereby constitute ourselves an association to be known as the Alumni Association of the Leland Stanford Junior University.

I. MEMBERSHIP

1. All persons who have received a degree from the Leland Stanford Junior University are members of this Association.

2. All members of the Faculty are honorary members of this Association.

II. OFFICERS

1. The officers of this Association shall be: (1) a President; (2) one Vice-President for each successive group of five classes (provided that when the last group shall number three classes it shall thereafter be entitled to a Vice-President); (3) a Secretary-Treasurer; (4) an Executive Committee consisting of the Secretary-Treasurer and four other elected members, one of whom shall be designated as Chairman, but the President shall not be a member of the Committee; and (5) an Advisory Board, consisting of the President, one representative elected by the graduating class for the term of one year, and nine elected members who shall be graduates of five years' standing, and who shall be elected for three-year terms. At the first election held subsequent to the adoption of this section the nine elected members shall be divided into three groups, the three receiving the highest number of votes shall hold office for three years, the three receiving the next highest shall hold office for two years, and the remaining three shall hold office for one year. Thereafter at each annual meeting there shall be elected three members for terms of three years each. The Advisory Board shall elect its President and Secretary.

2. All other officers shall serve for one year or until their successors are elected.

III. DUTIES OF OFFICERS

1. It shall be the duty of the President to preside at all business meetings of the Association, to deliver the President's address on Alumni Day, and to perform such other duties as usually belong to his office.

2. It shall be the duty of the Vice-Presidents, in the order of seniority of their groups, to preside in the absence of the President and to perform the other duties belonging to his office.

3. It shall be the duty of the Secretary-Treasurer to keep accurate minutes of the meetings of the Association and to act as Secretary of the Executive Committee, of which he shall be a member.

4. It shall also be the duty of the Secretary-Treasurer to have charge of the collection and disbursement of the funds of the Association.

5. The Secretary-Treasurer shall be allowed ten per cent of all dues or assessments collected, as compensation for his services.

6. It shall be the duty of the Executive Committee to arrange for the program to be presented on Alumni Day; or any programme for other public occasions; to regulate the finances of the Association; to perform such other duties as may be imposed upon it; and to attend to all business of the Association not otherwise provided for.

7. It shall be the duty of the Advisory Board, when deemed advisable, to consult alumni, undergraduates, faculty, and trustees, and to make recommendations regarding the welfare of the University and of the Alumni Association.

IV. COMMITTEES

1. The President shall be ex-officio a member of all Committees, except the Executive Committee.

2. At each annual business meeting the President shall appoint a committee of two persons to audit the Treasurer's accounts.

V. ELECTIONS

1. The February issue of the *Alumnus* shall give notice of the annual nomination and election of officers of this Association. Said notice shall contain the names of the incumbent officers and shall indicate the hold-over members of the Advisory Board, and shall contain in full the provisions of this Constitution relating to nominations and elections.

2. Nominations in writing, signed by at least twenty members, shall be required for any nomination. Nominations shall be forwarded to the Secretary-Treasurer between the first day of February and the first day of April of each year. On or before the fifteenth day of April of each year, the Secretary-Treasurer shall mail to every member of this Association, whose address he knows, an official ballot containing all the nominations, with the addresses of the nominees and the number of proposers of each, and said ballot shall be published in the May issue of the *Alumnus*.

3. Officers shall be elected at an annual election to be held at Stanford University on Alumni Day, between the hours of nine o'clock A.M., and twelve o'clock noon. The Executive Committee shall have charge of the election. The elector may cast a written ballot in person, or by mail addressed to the Secretary-Treasurer, marked "Ballot" and disclosing the sender's name, and enclosing a ballot in a plain envelope. Ballots so received shall be opened and cast only during the hours of election. The respective candidates receiving the highest number of votes shall be declared elected. A tie vote shall be decided by lot.

4. No one whose annual dues are in arrears for the current year shall be entitled to vote or to hold office.

VI. DUES

The dues of the Association shall be $1.25 per year for each member thereof, which amount shall include a subscription to the *Alumnus*.

Provided, however, that all members who, prior to May 1908, have paid $5.00 shall be exempted from further dues.

VII. MEETINGS

Meetings of the Association may be called by the President or by petition of twenty members, said meetings to be held at Stanford University.

VIII. AMENDMENTS

Any proposition to alter or amend these Articles of Association must be proposed in writing, signed by twenty members, and submitted to the members by mail in printed form by the Secretary-Treasurer, and voted upon in the same manner as are nominations for officers, and adopted by a majority vote.

OFFICERS OF THE ASSOCIATION, 1910-11

President—WILLIAM WESLEY GUTH, '95.

Vice-Presidents—HARRY BADGER REYNOLDS, '96; KATHERINE CHANDLER, '00, FRANK OAKES ELLENWOOD, '04, GEORGE JAMES PRESLEY, '07.

Secretary-Treasurer—JOHN EZRA MCDOWELL, '00.

Executive Committee—CHESTER NARAMORE, '03, Chairman; FRANK ADAMS, '01; LELAND CUTLER, '06; ALMON EDWARD ROTH, '09; JOHN EZRA MCDOWELL, '00.

Advisory Board—WILLIAM WESLEY GUTH, '95 (ex officio); LELAND SCOTT, class of 1910; EVELYN WIGHT ALLAN, '96; THOMAS MARION WILLIAMS, '97; MICAJAH ANDERSON THOMAS, JR., '04; RICHARD WATTS BARRETT, '04; GEORGE EDWARD CROTHERS, '95; HERBERT COFFIN JONES, '02; BENJAMIN PALMER OAKFORD, '02; DENNIS SEARLES, '95; RAY LYMAN WILBUR, '96.

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